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General Direct

Two Ways of Improving the State Universities*

THE civilization of America is built from the natural resources of America. When the pioneers came they found what seemed to be limitless natural resources. There were great forests extending far into the distance; there were broad acres awaiting only the touch of the plow and the hand of man to yield rich harvests; there were enormous deposits of ore awaiting only the coming of the scientist to produce the machinery of civilization; there were rivers whose water power was unharnessed.

We pay tribute to the pioneer who moved from east to west across this continent, facing all of the dangers of a new country filled with unfamiliar inhabitants and infested with wild life. The life of the pioneer is a life of romance. It appeals to old and young alike. But there followed in his wake those who made his home-sites more secure, who built railroads, constructed bridges, erected schoolhouses and churches, who laid the basis for a new civilization. Frontier after frontier was conquered. The "boundless" forests of New England, of Virginia, of Michigan, of Minnesota disappeared in turn. Today most of our building material is shipped from far-away Oregon, or Washington, or from Canada. As one travels through New England and Virginia today he is struck by the great number of abandoned farms. Census reports, just issued, show that the number of farms in practically every state is steadily declining. The rich top soil which man found, and which he exploited without giving a proper return, has been destroyed. The same kind of waste has been indulged in in the coal, copper and iron mines. With the cutting of the forests there has been a decrease of rainfall and a drying up of the swamps, a lowering of the streams, and a consequent disappearance of much of the game and wild life of the country.

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*Presidential address at the annual meeting of the National Association of State Universities, Washington, D. C., November 19, 1930.

But it is true, nevertheless, that these forests and mines and this rich top soil and the other resources of nature have furnished us with the wealth which enabled us to establish our present level of civilization. They have supplied the resources which have made possible our great urban centers, our unparalleled means of communication, our great electrical development, and a thousand and one other things that contribute to the comfort and pleasure of our people. The wealth derived both directly and indirectly from the riches of nature has paid the bills for all of our social and welfare work. It has helped to establish and to maintain the charitable and penal institutions, and it has been largely responsible for the great progress which America has made in the development of her educational system.

America derived the funds to establish and maintain her standard of living, her forms of institutional life, including education from agriculture and its products, from the forests and their products, from the mines and their products, from the development of the streams and their products.

Now America faces a new situation. There are no more forests to speak of. It will take fifty years or more of care and cultivation to produce a pine forest of commercial value in Minnesota. The mines are being exhausted. The top soil is becoming thinner and more fertilizer is being required every year to make it productive. The number of farms is becoming fewer. Water power, to be sure, is being developed, but there is less water to be harnessed than there was a hundred years ago. Meantime civilization has become more complex, its problems more numerous and more difficult of solution. The important question which the American people face is: How shall the civilization which we have established now be maintained and advanced? Certainly we cannot use the methods which our forefathers used if there is nothing to which we can apply them; we cannot cut timber if there is no timber to cut; we shall not be interested in mining if there is no ore to be mined.

Perhaps it may be said that we are no longer dependent directly upon nature for our material development, and in a

certain sense that is true, for man has, through inventions, devised thousands of new ways of producing wealth and of contributing to his comfort—ways that sometimes seem remotely related to the processes of nature. Man, for example, has organized capital and built machines which have greatly increased his power of production. Yet the fact remains that these have been achieved in large part because of the supplies nature so lavishly furnished him. In achieving these things it is obvious, even to the most casual observer, that he has been wasteful of nature's supplies; now he must turn to means to aid him if he is to maintain and to advance civilization.

When Mr. Julius Rosenwald created a great foundation at Chicago recently, he issued a statement to the effect that he expected the entire sum to be spent within the next twenty-five years. He said that he believed that each generation should spend its own riches in improving conditions largely for itself. This I believe to be essentially an unsound doctrine. We have built this civilization, to a very large extent from capital which we found. In destroying that capital and in utilizing its products for our own personal benefit we lay a heavier burden upon the generations that follow to maintain and advance civilization. There is current in America a doctrine that each generation has gotten along fairly well, therefore the next one can. We say we have provided for ourselves, therefore why should we make any provision for the next generation? We assume that it will be as easy for it to make progress as it has been for us. That, too, in my opinion, is a thoroughly blind and selfish position to take with regard to the welfare of the social order. If we establish a basis for civilization and assume that those who follow after us will find other sources of wealth to maintain it, time may prove that we have reckoned without the costs.

It is my opinion that the course of civilization in the future, certainly so far as its material benefits are concerned, will depend upon what happens in the laboratories of men. New wealth may not be as easy to obtain in the future as it has been in the past. It seems clear that the next generation may

find that it must supply its wants by relying upon research rather than upon bounteous nature. It will be more expensive to maintain and advance civilization through science than it has been to advance and maintain it on the profits of nature.

Our generation and those that preceded it have been drawing heavily upon their capital assets for current operations and expenses. By capital assets I mean the measured resources which nature gave them. They have converted these into money and spent it. But very little of this capital has been set aside as an endowment. Almost no provision has been made for future growth. We have gone on cutting our trees, exhausting our mines and devastating our soil, with little thought or consideration for the welfare of the next generation.

One cannot say that no consideration has been given to it, for both the federal and state governments have set aside some lands and timber for the endowment of education, and in more recent years the legislatures of a number of states have provided that a certain share of the occupational and royalty taxes shall be converted into endowment funds for education. But the endowment funds are altogether too small to be especially significant.

If the leaders of the various states are interested in building a civilization where there will be little or no poverty, where men will enjoy all the known comforts of life, where they will have the benefit of the most modern developments of medicine, of surgery, and of nursing, where literature may flourish, where education will be universal, where science will be stimulated and creative work will be encouraged to the very limit, they will not be satisfied with the biennial legislative appropriations their legislatures grant them. They will take steps looking toward the establishment of great endowments, the income from which shall be used for these purposes.

One state has already taken steps towards the achievement of this end; it is the state of Texas. She has made provision for the building of an endowment, so I am told, for her uni-

versity which will amount to two hundred million dollars. This means that there will be a great people in Texas whose welfare and interests will be studied and served, whose problems will be examined and solved by great scholars and scientists on the staff at the University of Texas.

Not long ago I heard a distinguished gentleman say that the state universities of this country could not compete with the great private universities; that the private universities, with their endowments and with the increasing millions which come to them annually in the form of gifts from their friends and alumni, will make it impossible for the state universities ever to compete with them. This is a confession that the states are willing that their universities shall be commonplace, that they shall not exercise the leadership to which they have aspired; for, if they cannot compete successfully with the private universities, they will never be able to attract or to retain persons of distinction on their own staffs. There are very few states, if any, in the Union that are not wealthier than all of the alumni of any of the private universities. There are undoubtedly some states that have more wealth than all of the alumni of all the private universities combined. Furthermore, there is no reason why the states should not do for their universities what the alumni are doing for private universities, that is, set out deliberately to aid them by building large endowments for them year by year. This can be done without molesting in any way the effective control of the people of the state through the legislature over the universities and, furthermore, it will lay the basis for continuing and advancing civilization generation after generation.

In addition to the alumni of private institutions, the great foundations of this country appear to be more interested in financing and endowing private institutions than they are in financing and endowing state universities. A study of the contributions to higher education made during the last seven years by the General Education Board, the Carnegie Corporation, the Rockefeller Foundation, the Commonwealth Fund, and the Laura Spelman Rockefeller Memorial reveals the

very interesting fact that 91.5 per cent of their contributions during this period have been made to private universities and to private colleges, 8 per cent have been made to state universities, 0.1 per cent to municipal universities, and 0.4 per cent to state colleges. It also reveals the fact that these grants are made to a small number of institutions. These institutions have been described recently as "prestige" institutions. It would appear from the distribution of funds by the foundations during this period of years that there is some basis for the opinion that they are not genuinely interested in research or in higher education as such but that they are interested in research and higher education in a limited number of these prestige institutions.

The baneful effects of this policy upon higher education in general—if it be a policy and if it is continued—are perfectly obvious. Consideration of this important matter must be given by the various states and individual philanthropists if public welfare is to be conserved and advanced.

There is no good reason why the great foundations should not finance and endow projects at state institutions if highly favorable conditions for carrying on these projects prevail at these institutions. In fact, the stimulation of intellectual effort and provision for permanent centers for research at various places across the country, in both public and private institutions, is highly desirable in the interest of higher education and in the interest of public welfare. But this is not the policy of these foundations; at any rate it does not appear to be their policy. The foundations should join with the states just as they do with the alumni and others interested in the private universities in providing endowments at state institutions for the purpose of insuring social progress.

Every state that looks to the future will take steps to provide for its progressive development. In doing so it must be willing to spend millions for research and conservation; it must provide endowments of tens of millions rather than hundreds of thousands.

In the second chapter of this paper I wish to discuss another matter which I think will contribute to the distinction of the

state universities. Endowments I believe to be necessary, but it will take time to build them. Meantime there is no good reason why the state universities should not give careful consideration to the allocation of functions. There is, we know, in America a marked tendency for higher institutions of learning to duplicate each other. Hitherto, institutional respectability has seemed to require this. And yet in this very tendency there is a weakness, if not a menace, to American education. It could easily be shown that the refusal on the part of higher institutions of learning to consider the allocation of functions results in inefficiency and in mediocrity. Not all of the colleges and universities can be distinguished in everything or in many things.

Some of the duplication of work and of effort in the universities is both socially necessary and desirable; that, for example, which provides training in the common essentials of an educated citizenry; but that which is dedicated to special fields of learning and to limited sections of knowledge would prosper more if it were, by agreement, concentrated in fewer places. Research in limited fields and sections of learning and knowledge could be carried on in a few places, the several institutions cooperating rather than competing as at present.

A few illustrations will make clear the lack of national and state policy with regard to this problem. The Federal Government has made grants from time to time for the promotion of higher education. These grants have often been made and certainly they have been distributed on artificial bases that had little or no relation to need. Money has been distributed for agricultural and engineering experiment stations in the form of an equal sum for each state. The same practice, in general, has been followed with regard to the distribution of other money for the promotion of other types of research or education in which the Federal Government is interested. In other words, this money is distributed to states without regard to whether or not they possess the conditions necessary for its wise expenditure. A typical illustration will suffice.

Washington and Idaho receive practically the same amount of money from the Federal Government. The land-grant college in Washington is located 8 miles from the University of Idaho. Each of them has all of the departments that a college of agriculture is supposed to have. Each of them maintains a school of forestry and each of them maintains a school of mines. They are trying to serve the same agricultural, forest, and mining area. If it were possible, under federal legislation, for Idaho to limit her functions to certain fields and Washington to limit hers to still other fields, abler men could be secured at each of these institutions and the whole area which the two universities are supposed to serve would profit thereby.

How many schools of forestry or how many schools of mining or how many genuine agricultural experiment stations this country actually needs, the country has never really dared to say.

The states have gone on accepting the money which the Government has handed them for forestry, or mining, or agriculture, even though they may not have possessed facilities competent to carry on high-grade research. In other words, the money has not been distributed to the men who have already demonstrated their fitness and ability to do or to direct the research work which our national welfare requires. As a matter of fact, many of these men may not be in state institutions at all; they may be in private universities. It has been the general practice and policy of the Federal Government to distribute its money to public rather than to private institutions. The consideration on the part of the National Government of the allocation of functions and the distribution of money according to areas, and according to the location of men competent to carry on research, would result in a wiser expenditure of money. Fewer centers, properly located, thoroughly equipped, and unusually well staffed, will produce more in the long run than a large number of centers inadequately equipped and poorly staffed.

It may be said that federal money has been distributed partly for the purpose of stimulating research in certain

areas, but research cannot be stimulated in this way. It is possible to build a building and to equip it and to call it an institute of research of some sort, but it takes more than buildings and equipment to produce research. Now and then there may be an isolated case of a man of rare ability located at some one of these more remote experiment stations. They would be found in greater numbers, however, if the experiment stations were consolidated and if the problems upon which they are at work were related to the interests of geographical areas. In other words, the Federal Government, if it desires to have its money used to promote the common welfare in a most effective manner, should disregard state and political lines and arrange for its distribution on the basis of the common problems found in given areas and regions.

Not only has the Federal Government failed to exercise foresight and wisdom in the distribution of money for educational purposes, but the states themselves have perhaps been equally derelict in this matter. The distribution of federal moneys has been controlled largely by politics rather than by educational needs. The appropriation of state moneys has been controlled to a very large extent by local pride and prestige. There has been a struggle on the part of the state universities to acquire academic respectability. This has consisted to a large extent in the number and variety rather than in the quality of offerings.

It would be the part of wisdom, so it seems to me, for those institutions located in a given region to join in outlining their programs, in defining their functions, and in allocating their responsibilities. To be specific, the state universities at Illinois, Iowa, Ohio, Michigan, Wisconsin, and Minnesota might agree that Minnesota should become the great library center for the Scandinavian cultures and that all these other institutions should assist the University of Minnesota in becoming such a center. They might agree that the University of Michigan should become a great center for the Romance languages and that all the other institutions should assist Michigan in becoming such a center. If this plan were

followed and extended, each of these universities might become the leading library center for some one of the great fields of learning. Each of these universities would, of course, have in its library all of those books and pamphlets and other materials which are necessary for undergraduate instruction and for the common culture of people everywhere.

Again, it would seem that cooperation in carrying on experiments of direct interest to agriculture is possible. There is already considerable cooperation in this field. It is doubtful, however, whether the large-scale stock feeding experiments are necessary at Wisconsin, Minnesota, Ames (Iowa), and Illinois; at any rate, it scarcely seems that they need to be carried on simultaneously. Experiments of this sort require large sums of money. It should be possible for those who are interested in the stock feeding experiments at these various institutions of learning to be constituted into a cooperating committee with the understanding that the various members of this committee would direct the experiments and check all the results. What has been said with regard to stock feeding applies with equal force to poultry raising, to the various aspects of animal husbandry, to the study of plants and insects injurious to crops, to the diseases of animals, and the like.

If this plan were extended, it is conceivable that institutions would send students who have received certain fundamental training to each other for more advanced training. It is conceivable that the states would provide scholarships which would enable them to send men from Minnesota to Wisconsin or Illinois or Iowa for certain training, while Wisconsin, Illinois, and Iowa in turn would send certain men to Minnesota for certain training. Such a plan as this would insure a better and higher grade of scholastic work; it would promote and encourage research; it would insure greater permanency on the part of the staff; and it would enable the institutions to pay the abler men more than they are now receiving, for with a limitation of functions some money would be released which could be used to improve the quality of the staff.

Some of the private universities have already appointed

committees to consider this very matter. I know of one group of institutions that has appointed a committee of research in the various medical fields with a view to emphasizing to a greater extent than hitherto the researches to be carried on at each of these institutions. For example, one of them may become the cancer center, another the eye, ear, nose and throat center, and so on. This means that the private institutions associated in this manner will not be appealing to the same sources for funds for the same purpose.

Whenever the colleges and universities of America free themselves from that fetish of respectability which requires them to offer instruction that their neighbors are offering; when they cease to compete for the purpose of salving their consciences; when they decline to appeal for money because someone else has something; when they discard that selfish tradition to which they cling and before which they worship —a tradition that those are best which present the greatest variety of offerings—then college and university instruction in America will be conducted on a higher plane than ever before. Whenever the public is able to rise above state lines, whenever its legislators refuse to think of the political consequences of their acts, then the universities will receive that encouragement, sanction, and support that they should have in carrying out the kind of program which is herewith outlined.

It is my opinion that the next ten years or less will see many steps taken in both of these directions, that is, the establishment and growth of state endowments for state universities and the allocation of functions between the institutions themselves.

LOTUS D. COFFMAN,
University of Minnesota.

The Economic Impasse of the Western World*

ALONG the entire frontier of Western civilization the forces that have made for the collapse of markets, the retardation of economic enterprise, and the unsettlement of mass confidence in current leadership are today challenging the worth and the workability of the Western economic order. And in the midst of this world-wide economic depression the forces of education and the forces of industry are occupying the two most heavily shelled sectors of the Western world's social battle-line. We do not yet know what the outcome of this challenge and of this contest will be. The forces of education and the forces of industry may be beaten into panic retreat by the disintegrative forces of revolution or by the integrative forces of dictatorship. The captains of education and the captains of industry may rest content with defensive tactics, dig themselves more deeply in, and do no more than hold their own for some time to come. Or they may evolve a fresh strategy of advance and move forward to new conquests of economic prosperity and social good.

I am not foolhardy enough to venture a prophet's guess among these three possibilities. I am content to say that I think the third outcome is possible, and that it lies very largely with the leadership of education and the leadership of industry to say whether or not it shall be realized.

The United States is, at the moment, in the midst of the most serious economic crisis in its history. Even with markets tumbling about our ears and with salesmen reluctantly reporting their quotas unfilled, there is, save for the breadlines in our congested centers, a bright, delusive air of well-being among our people that tends to hide from the average American the deeper significance of the depression through which we are passing. We have known phases of slowing

*Address delivered at the Annual Meeting of the National Association of State Universities, Washington, D. C., Nov. 20, 1930.

down in which the American people, as a whole, were on a lower level of living than now, but in its basic character the current depression is unlike and more serious than any depression that has preceded it. It is the first general crisis that has befallen us since our machine economy has come to measurable maturity. It is not a matter of momentary maladjustment in any one section of the world. It is not a matter of momentary speculative mania disrupting an otherwise statesmanlike and stable economic program. There is nothing to be gained by beating about the bush. The entire economic order of the Western world has reached an impasse from which only the most clear-headed, creative, and courageous educational, industrial, and political leadership can extricate it.

That this is not the facile generalization of a frightened academician is proved, I think, by four obvious but all-too-generally overlooked aspects of this depression, viz:

First, the current economic depression is not simply American; it is world-wide. I call a partial roll of the areas that are, in varying degrees, today feeling the impact of one aspect or another of economic depression: The United States, Great Britain, Canada, India, Australia, Germany, Italy, Sweden, Switzerland, Poland, Czecho-slovakia, The East Indies, The Netherlands, Mexico, Chile, Peru, Brazil, The Argentine. And so on. We are in the presence, gentlemen, of a world phenomenon. The Americas, Europe, Asia, Africa, and the Antipodes—all stand today as if some subtle spell of economic witchcraft had been put upon them.

Second, the current economic depression is not simply a financial depression; it is industrial as well. We should today be wrestling with forces of economic retardation even if there had been no Black October in the 1929 operations of the Stock Exchange. The market debacle was but an eddy in a major current of economic tendency. In the United States, significant sections of industry, such as the automobile industry, had been reaping the easy harvest of a first-sale market, and were beginning to reach the point at which, by and large, the market was settling down to a matter

of replacements and of meeting the new needs created by normal growth of population, or by radically new departures in design, quality, and price. American business and industry were catching up on the postponed building and buying that had kept the air electric with enterprise in the immediate post-war decade. Various artificial stimuli to business, such as installment buying and the mania for annual models, were rounding out their pioneer push and settling down to a normal pace of development. And throughout the world the potential energies of the machine age were beginning to feel the irrational restrictions of tariffs and trade policies that had been created by an obsolete political leadership, tariffs and trade policies that stood and still stand in utter violation of the clear conclusions of common sense and of all the canons of constructive statesmanship. The current depression is more than a *faux pas* of the financiers; it is a kind of judgment day for industrial leadership. We might reform the Stock Exchange and still the ghost of this depression would not down, for it sinks its roots in all the policies and processes of our industrial order.

Third, the current depression is not simply financial and industrial in its scope; it is agricultural as well. I need not, I am sure, argue this assertion. Alongside the world-wide industrial depression there is a world-wide agricultural depression, again emphasizing the fact that the phenomenon we are facing goes to the very foundations of the economic order of the West, in particular, and of the world, in general. The agricultural aspect of the current depression strikes, with utter impartiality, exporting and importing countries alike. Such exporting countries as the United States, Canada, and Australia are hit by an agricultural depression due primarily to economic and secondarily to political causes. Such importing countries as Germany and England are hit by an agricultural depression due primarily to political and secondarily to economic causes. For every existing agricultural surplus in any part of the world there are somewhere in another part of the world undernourished bodies enough to absorb it. But we seem not to be able to muster a

statesmanship that can lift the peoples of these areas of under-consumption to the level of paying customers and bring the supply into contact with the need. And so we must admit a bankruptcy of leadership and shame ourselves by confessing a world-wide agricultural depression that would be unthinkable to a really intelligent race.

Fourth, the current economic depression is not marked by an over-production of manufactured goods alone; it is marked by an over-production of raw materials as well. In the last decade or two there has been a staggering increase in the production of raw materials and foodstuffs. From 1909 to 1914, the average world production of sugar was 19,363,000 short tons. By 1929, it had jumped to 29,970,000 tons, or, roughly, a 50 per cent increase. In less than two decades the United States increased its wheat acreage from 47,000,000 to 61,000,000 acres, while Australia and Canada more than doubled theirs. The world had a full year's supply of coffee on hand when this year's crop was ready for harvest. The world output of tea jumped, in four years, from 856,000,000 to 945,000,000 pounds. Rubber jumped from 51,000 to 68,000 long tons. From 1926 to 1929, the world output of tin jumped from 145,000 to 195,000 metric tons, lead from 1,606,000 to 1,775,000 metric tons, zinc from 1,245,000 to 1,470,000 metric tons, and copper from 1,485,000 to 1,908,000 metric tons. This expansive output of raw materials is, again, a world-wide phenomenon. From 1910 to 1914 Australia's average wheat production was 90,497,000 bushels. Twelve years later it had jumped to 160,762,000 bushels. In 1913, Australia's wool production was 711,500,000 pounds. In 1927, it had jumped to 883,304,000 pounds. In 1913, Chile's output of copper was 93,147,000 pounds. In 1928, it had jumped to 528,487,000 pounds. And even in the face of the rapid development of synthetic nitrates in Germany, England, and the United States, the output of Chilean nitrates jumped from 2,772,000 metric tons in 1913 to 3,163,000 metric tons in 1928. I take these figures, more or less at random, and with no attempt to paint a complete picture, in order to emphasize the fact that the current glut

of manufactured goods is not the whole story of the current depression.

We are face to face, then, with a phase of economic depression that is world-wide in scope, financial, industrial, and agricultural in character, and marked by a sluggish surplus alike of manufactured goods and of raw materials. But tonight I want to do no more than suggest a point-of-view respecting the industrial depression in the United States and say what I think it implies by way of challenge to the leadership of education and the leadership of industry.

As the United States swung into the closing months of 1929, our machine order was never more efficient from the point of view of potential productive capacity, but our economic order found itself swamped rather than served by the efficiency of the machine order. (I use these terms—machine order and economic order—in a more severely separate and limited sense than the technical economist uses them. By the machine order I mean the whole array of processes by which we make goods and produce wealth; by the economic order I mean the whole array of policies by which we use goods and distribute wealth.) Never was there less defensible excuse for economic depression than in the closing months of 1929. There was no shortage of money. There was no shortage of basic resources. There was no lack of willing hands to work. There was no lack of productive efficiency. There was no plague-like adversity of wind or weather. There was no insect pest either nation-wide in its ravages or seriously out of hand. There was no invader hammering at our gates to terrify our spirits and to disrupt the normal processes of our enterprise.

On the contrary! There was an ample money supply. There was a surplus of nearly all basic resources. There were millions of workers ready to work. The productive efficiency of the nation was such that the needs of its people and much besides could have been easily supplied with shorter working days and a shorter working week. At no moment in human history had a people found itself in possession of so nearly all of the material essentials for a great and glowing civiliza-

tion. It was at such a moment that the United States found the shadow of a serious economic depression falling athwart its life.

At the very moment when the market collapse and economic retardation befell it, the United States was basically at the point towards which the dreams of prophets and seers have pointed through the centuries. As we re-read the literature of Utopian thought and list the things that the social seers have, with striking unanimity, set down as elementary requirements of an ideal society, we find that the United States was in position to provide them all in the closing months of 1929. It had invented machines enough to emancipate its people from drudgery. It had achieved a productive efficiency that made possible the production of everything its people needed without their slaving from dawn to dusk. Leisure in which to laugh and love and adventure among things of the mind and spirit was within the nation's grasp.

And yet, just when we had reached the point at which emancipation from drudgery, the capacity to produce all the essentials of material well-being without the slavery of inhuman hours, and the potential achievement of prosperity and leisure for all were at hand, we found ourselves victimized by a financial debacle, an economic recession, and a vast social unsettlement, in which men walked hungry in the midst of plenty. What must the gods have thought as they watched this tragi-comedy!

I do not want to join the over-simplifiers, and bring a false clarity to a situation that is admittedly complex. The cause of the current economic situation cannot be captured in a phrase or its cure distilled in an epigram. But one thing is, I think, sun-clear: The leadership that has developed our policies for using goods and distributing wealth has proved inferior to the leadership that has developed our processes for making goods and producing wealth. We cannot, of course, tear the machine order and the economic order apart in our thinking. They are too intimately interlocked. But in the deepest sense I think it is accurate to say that the

current depression is, in essence, an indictment, not of the machine order, but of the economic order.

Let me translate these abstract observations into concrete terms. It is by now a threadbare platitude—even if a young platitude—to say that our machine economy is in trouble because our capacity to purchase has not kept pace with our capacity to produce. Following the war, some of the more far-sighted leaders of American business and industry adopted a new credo that said a stable and widely distributed prosperity and healthy industrial development required high wages, short hours, and low prices. This ran contrary to the naive business thinking of earlier generations that said low wages, long hours, and high prices made for maximum profit. But outstanding industries throughout the United States proved by their balance sheets that high wages, short hours, and low prices were not only good for the masses but good for the manufacturers. And we are in the grip of depression now, not because we followed this new credo of business, but because we did not follow it generally enough or apply it far enough.

The simple fact is that a machine economy must, along with the making of commodities, see to it that the consuming millions have money with which to buy and leisure in which to enjoy the products the machine economy creates. And that means higher wages than we have yet paid, shorter hours than we have yet set, and lower prices than we have yet fixed. Our machine economy is today sinking us in a sea of surplus production that we have not yet proved statesmanlike to use to the advantage of ourselves and of the world. I decline to concur with the observers who insist that we are producing too many goods. There are 120,000,000 of us in this nation, and, as a people, we have far from satisfied the legitimate demands of a healthy and civilized folk. There is a whole world outside our frontiers in which millions upon millions of men and women are living far below the consumption level we have known and that health and civilized values dictate. If we are at all sensitive to the physical and spiritual needs of humanity, to say that we are

now or shall be for generations to come at a point where humanity is surfeited with goods and services it does not need for better living is, to me, too incredible to consider seriously.

But that we are producing more goods than the consuming millions are able to purchase is obvious. Production and consumption are seriously out of balance. There are two obvious ways to deal with this disturbed balance between production and consumption. We can slow down production by deliberate policy or we can speed up consumption by deliberate policy. I shall not attempt to disguise my conviction that to throw the brakes on our productive capacity would be a coward's policy and a social retreat. We have evolved a machine economy that can, if we will but bring a far-sighted statesmanship to its direction, emancipate the race from drudgery, lift the standard of physical well-being throughout the world, and give mankind at last leisure in which to cultivate values that lie beyond economics. But the machine economy will never do these things unless and until the leadership of industry sees to it that a larger share of the national income is shifted into the pockets of the consuming millions, and until the margin of leisure for the millions is markedly increased. And if and when the leadership of industry assumes as one of its major duties increasing the income and the leisure of the millions, it will discover that, as a by-product of this statesmanlike social ministry, it has made greater profits than ever before.

A simple and single challenge lies coiled at the heart of this depression: Will the leadership of industry prove as capable in producing civilized consumers as it has proved itself capable in producing consumable commodities? Unless it does, industrial leadership must resign itself to the certainty that our machine economy will slump into chronic depression and ultimate collapse.

The logic of events is at last proving that the basic policies that will prove best for labor are the policies that will prove best for capital and vice versa. It is at last evident that it is to the best interests of business that a larger share of the

national income shall find its way into the hands of the masses who buy consumable commodities. It is obviously self-defeating for business to get itself into the position to produce vast quantities of goods, unless, at the same time, it sees to it that there are vast masses of potential consumers ready with money to buy and leisure in which to use the goods that business produces.

In the entire history of business America, every general reduction of hours and every general rise in wages, however bitterly fought by business and industrial leadership at the time, has been followed by a fresh accession of business activity and general prosperity. It is one of the ironies of history that the very things for which labor and liberalism have pleaded through the generations, on the ground of simple social justice, namely, high wages, short hours, low prices, are now seen to be the only things that can, in the interest of the solvency of capitalism, keep our industrial order a going concern.

In the field of education, the specialist has broken down in the face of a crisis that only the broadly educated man, who can see things steadily and see them whole, could master.

In the field of industry, the machine order—which makes goods and produces wealth—has been astoundingly successful, only to find its success turned into defeat because the economic order—which has to do with using goods and distributing wealth—has not been able to make wise use of the marvellous efficiency of the machine order for the benefit of all.

By a thousand superficial tests our captains of education and our captains of industry have been successful during the decade just closed, but, in the deeper sense, they failed when faced with the crucial test of their careers, namely, the prevention of the current economic depression. And before they can again lay claim to success they must help us do two things, viz:

They must help us make our universities once more educational institutions as well as training stations for narrow specialists.

They must help us make our economic order as socially efficient in its policies for using goods and distributing wealth as they have made our machine order technologically efficient in its processes for making goods and producing wealth.

The gist of what I have tried to say tonight is that our panicky present is the result of our planless past. If we isolate any section of economic America, we find that it has been managed admirably, but if we look for general economic statesmanship, we look in vain. If we permit the present to be as planless as the past has been, if we content ourselves with hastily improvised policies to jack up morale or hastily improvised protests to provide stump speech copy for the next campaign, we shall find ourselves citizens of a fear-ridden future in which we shall be dragged at the heels of forces and fears over which we shall be able to exert no more control than we exerted over the forces that brought a bloated market to explosion in the fall of 1929.

This fear-ridden and uncontrolled future need not be. There is genius enough in America to evolve and to execute political and economic policies that will give us a future that will, in point of material well being and social enrichment, far outstrip the very real, if somewhat spotty, prosperity of the last decade. If America does not realize this finer and more fruitful future, and begin her realization of it with decent promptness, it will be either because at the top we suffer a breakdown of industrial, political and educational statesmanship or because at the bottom the people, in a moment of leaderless confusion, fanatically follows some false prophet from either the ultra-reactionary or the ultra-radical camp. It will not be because the cards of destiny are stacked against us. They are not. Every card in the deck is in our hands. It is a matter of playing them expertly.

GLENN FRANK,
University of Wisconsin.

The Chicago Plan*

ON Thursday, November 12, the Board of Trustees of the University of Chicago approved a plan of reorganization recommended by the University Senate, which consists of all the full professors. The plan was radical, for it abolished institutions and trade names that have long been familiar to us all. But it was intelligent because it frees education and research from the effects of antiquated machinery. Its benefits should be felt immediately by every student and every professor. Although it has been in operation only a week, its benefits have already been felt by the administration.

The plan removes from the academic scene the graduate school, the senior college, and the junior college. The University now consists of the professional schools and five divisions in Arts: the humanities, the social sciences, the biological sciences, the physical sciences, and the college. The college faculty is charged with discovering what a general higher education is and ought to be, for none of us is so bold as to say he knows today. All that we know now is that a student leaves the junior college after he has passed eighteen courses with the minimum scholastic average. If we are asked whether he has had a general education, we can only reply that we hope so, even though we know that as he passed course after course he forgot the one he had passed as he passed on to the next. The first duty of the college faculty is to attempt to formulate a somewhat more adequate and satisfactory definition of a general education.

What the college course of study will be, we do not know. All we know is that it will probably be very different from what it is today. My purely personal view is that sooner or later it will be simple in the extreme. I should like to see four general lecture courses, planned to last through two years, in the humanities, and the social, physical, and bio-

*Address at the meeting of the Association of High School Principals, University of Illinois, Urbana, November 20, 1930.

ogical sciences. These should be open to anybody, but required of nobody. From the lecture courses those particularly interested and qualified should be chosen for seminar work in one or more fields, continuing to attend such lectures in other fields as might appeal to them. In this way those who wished merely to learn about the various divisions of knowledge might do so in the lecture courses. Those who wished a more specific orientation and could show that they deserved it might prepare for the upper divisions and the professional schools in the seminars. If I had my way (which would doubtless be very unfortunate), I should give tool courses only to those students who might be reasonably expected to need the tools, and these would be the college students in the various seminars. Students in the lecture courses would not do laboratory work and would not be taught such things as statistics and the languages. I would make the seminars the only small classes in the college, for I believe that a university can afford such classes only for students who are especially interested and able in a given field.

Under the system as now adopted by the University of Chicago a student will remain in the college until his general education is complete, irrespective of the time or courses taken there. General examinations will indicate that he is ready to pass on, and not the multiplication of credits. Credits have disappeared as the criterion of intellectual maturity. Instead of waiting until he has gone through eighteen courses the student may present himself at any time when he and his adviser are ready for the examination that marks the end of college work. Thus a genius might leave the college at the end of one quarter, a brilliant student might leave at the end of a year, the average student might leave after two years, and the student interested in college life after four. If a student passes the general examination with distinction, he should be automatically admitted to one of the upper divisions or the professional schools. Graduation from the College without distinction will mean an honorable exit for the man who wishes only a general education.

I may pause at this point to enumerate what we consider

the benefits of this type of collegiate organization to be. The first is that it will compel us to think what we are doing. You will agree that it is far more difficult to figure out what should constitute an education and the indicia thereof than it is to pass a rule saying that after a student has been through certain work he is educated. Although university presidents make a profession of omniscience, I cannot say that we ought to think, or what the result of our thinking will be. Perhaps our second state will be worse than our first. At least, however, we shall have made the effort to apply what intelligence we have to the solution of educational problems.

In the second place, we have an opportunity to adjust the institution to the individual. Students who wish only a general education may obtain it and depart with dignity thereafter. Students who wish to be scholars or professional men may enter a scholarly and professional atmosphere at the conclusion of a period devoted to their general education, the length of which depends entirely on their own abilities. If they have an interest in scholarship, they need not lose it by being bored to death by four years of undergraduate routine.

Finally we may, if we have the intelligence, work out a sound basis for advanced study, professional or non-professional. Professional work presumably may be started at the end of a good general education. But, since we have not known what a general education was, we have allowed our desire for prestige and our need to cut down numbers to increase the years in college required of all applicants to professional schools. If a good general education can be developed, professional schools and those awarding research degrees may well consider that this is an adequate foundation for their work and may well admit the student who had it without inquiring as to the years he spent in getting it or the degrees he accumulated on the way.

This, then, is the organization of the College of the University of Chicago, and these are the advantages that we may possibly derive from it under less vivid future conditions contrary to fact in present time. The other divisions are, as I

have said, the humanities, the social sciences, the physical sciences, and the biological sciences. These divisions will award all degrees in arts, literature and science, from the bachelor's to the Ph.D. Candidates will be recommended by an entire division, and not by one department, to the joint faculty of the divisions. A student will enter the divisions when general examinations disclose his capacity for advanced work. Eventually, I hope, he will receive whatever degree he is seeking in the same way. He could then present himself for the bachelor's examination when he felt ready to try it without waiting for the expiration of any arbitrary number of years. The same would be true of the higher degrees. As far as his course of study is concerned, his program throughout would be divisional and not departmental.

The advantages of the plan are obvious. The first group of advantages results from the coordination of teaching. At present, for example, we have four introductory courses in statistics in as many different social science departments. With a division of the social sciences one should immediately take the place of four. The aim will be to develop a divisional rather than a departmental curriculum. Departments will not institute or maintain work duplicating that of other departments in the same division. Through a divisional curriculum the student will have opportunities denied him hitherto. Many departments have insisted on narrow specialization in departmental fields. A divisional course of study means that departmental requirements will have to have the approval of the divisions, thus guaranteeing to the student the opportunities offered by all departments in the division and the consequent breadth of training that many of them now lack.

A second group of advantages that we fondly hope may accrue in the upper reaches of the divisional plan is the promotion of cooperation in research. I sometimes think that in many universities the faculty club is the most important educational building. There the professor of chemistry who is interested in atomic structure may meet the professor of physics who is interested in the same thing, and the professor

of criminology may meet the professor of criminal law. Otherwise they might never meet and might pursue their intellectual roads in ignorance of each other were it not for the accidental crossing of their gastronomic paths. Under the divisional scheme we bring these gentlemen together as part of a working and planning unit where they may by constitutional means interchange whatever enlightenment they may have on common problems. If knowledge could be confined within departmental lines, the administration of universities would be much simpler. Since investigations cross these barriers, it may be best to remove them, and allow those who are doing the investigating to share their abilities and perplexities.

A final advantage of the divisional organization above the college is the atmosphere of graduate and professional study that should develop for all students in the divisions. If a graduate school seems more scholarly than an undergraduate school and a graduate professional school better than one that admits undergraduates, it is not because of the maturity of students or because of the preparation of students; it is because of the segregation of students. We all know that segregation into a serious professional group has turned many a collegiate loafer into a first-rate professional man. If, then, we can take men who have finished their general education, though they have not the bachelor's degree, and introduce them at that moment into a group that is concerned with serious study, we get for many students the advantages that have traditionally been discoverable only in graduate schools. No one can be long in university work without becoming acutely aware of the scarcity of individuals prepared to devote themselves to a life of scholarship. Although the low level of faculty salaries is doubtless in large part responsible, there is another factor at work, and that is the method and content of collegiate instruction. Many people go to college with a real and even a remarkable excitement about scholarship. Still more could be excited if they could believe that there was anything important or vital in what the scholar does. In far too many cases this present or potential excite-

ment dies in the face of the peculiarities of the American university system. The first duty of an American university is to organize itself so that a student who wishes to become a scholar will not have insuperable obstacles put in his path.

This, then, is the reorganization of the University of Chicago, and these are the benefits we hope through it to confer on our students and ourselves. The whole business is an experiment. Perhaps we have not the brains to get from it all we should. At least we feel that, if we cannot now do a better job in education and research, we shall not be able to place the blame upon our organization. In our struggles we shall hope for the encouragement and criticism of the high school men of this state. That you are concerned in them goes without saying, for it is your charges, upon whom you have lavished years of effort and attention, that become our victims at the last. What light may come to you we hope you will share with us; your cause and ours are one.

ROBERT MAYNARD HUTCHINS,
The University of Chicago.

The Cooperative Test Service

IN VIEW of the widespread interest in a recent subvention from the General Education Board extended to the American Council on Education for the administration of the Cooperative Test Service by a Committee of the Council, it may be opportune to present in brief outline the origin and present status of this enterprise.

At a meeting of one of the sections of the National Research Council in 1923 a committee was appointed to consider ways and means of acquiring and making available knowledge of individual college students, in order that their fitness for their respective vocations might be discovered in a scientific manner as early as possible. The committee in charge called a conference of representatives of fourteen cooperating universities in Washington on January 1, 1925. At this meeting a Central Committee on Personnel Procedures was appointed, consisting of H. E. Hawkes, Columbia University, Chairman, Henry W. Holmes, Harvard University, Walter Dill Scott, Northwestern University, C. R. Mann, American Council on Education. After repeated meetings in which this committee attempted to determine the best method of attack on the far-reaching and important question submitted to it, it was decided that more data concerning present-day practice in colleges and universities was necessary before any definite plan of action could be proposed. To this end the committee requested and secured a grant of $7,500 from the Benevolence Fund of Mr. John D. Rockefeller, Jr., in order that Mr. L. B. Hopkins, then of Northwestern University, might visit the fourteen cooperating institutions, with a view to determining the methods of approach in these universities to the problems involved. The result of his study was published as a supplement to the EDUCATIONAL RECORD in October, 1926, and has enjoyed a wide circulation and very stimulating influence upon personnel procedure all over the land.

Following this report it seemed evident to the committee

that the first step toward solid accomplishment lay in the direction of preparing more accurate tools for use in personnel work in schools and colleges. To this end at a conference held at West Point on July 1 and 2, 1927, four sub-committees were organized as follows:

Sub-Committee on Personal Record Card
Sub-Committee on Achievement Tests
Sub-Committee on Personality Measurement
Sub-Committee on Occupational Information

The membership of the four Sub-Committees has been as follows:

Sub-Committee on Personal Record Card.—President L. B. Hopkins (Wabash College), Chairman, Professor E. L. Clark (Northwestern University), Professor J. J. Coss (Columbia University), Mrs. Mary E. Hayes (Vocational Service for Juniors, New York City), Professor D. T. Howard (Northwestern University), Professor J. H. Willetts (Pennsylvania).

Sub-Committee on Achievement Tests.—Dean H. E. Hawkes (Columbia University), Chairman, Professor V. A. C. Henmon (Wisconsin), Miss Agnes B. Leahy, Girl Scouts, New York City), Professor M. R. Trabue (North Carolina), Professor Ben D. Wood (Columbia University).

Sub-Committee on Personality Measurement.—Doctor D. A. Robertson (American Council on Education), Chairman, Dean F. F. Bradshaw (North Carolina), Doctor Grace E. Manson (Michigan), Professor D. G. Paterson (Minnesota), Professor E. K. Strong (Stanford).

Sub-Committee on Occupational Information.—Doctor C. R. Mann (American Council on Education), Chairman, Professor W. W. Charters (Ohio State), Professor A. B. Crawford (Yale), Vice-President C. S. Yoakum (Michigan), Mr. A. L. Williston (American Council on Education).

About a year later a fifth sub-committee was added on *Personal Development.* The membership of this sub-committee was as follows: Doctor A. H. Ruggles (Butler Hospital, Providence, Rhode Island), Chairman, Professor W. W. Charters (Ohio State), Professor J. J. Coss (Columbia University), Professor C. R. Lingley (Dartmouth College), Miss Dorothy Stimson (Goucher College).

Having defined the method of approaching the question and following the organization of the various sub-committees,

a further subvention of $20,000 a year for three years from Mr. Rockefeller was requested and granted.

The various sub-committees, acting under the general supervision of the Central Committee, have produced substantial results during the three years ending July 1, 1930. The personnel of the Central Committee has been modified since its organization by the resignation of President Scott and the addition of President L. B. Hopkins, Wabash College, Professor W. W. Charters, Ohio State University, Doctor A. H. Ruggles, Butler Hospital, Providence, Rhode Island, Dean P. C. Packer, University of Iowa. During his tenure as Assistant Director of the American Council on Education, Doctor David A. Robertson served as secretary of the committee. Upon his resignation Doctor John H. MacCracken was added to the committee to fill his place.

With the advice of Professor Ben D. Wood, who has made a profound and far-reaching study of the items which should be included upon record cards both from the point of view of the statistician and the personnel official, two cards have been prepared, one for the use of secondary schools and one for the college level.* Perhaps the most important and striking feature of this card is the arrangement in terms of a time projection. That is to say, all of the items which have to do with a given year are placed in a column which is devoted to that year. Consequently, a student's college career is entirely set forth in the four appropriate columns. If, however, one reads horizontally across the page instead of vertically, it is easy to follow the progress of the student in the various particulars referred to on the card. Although the card contains many items which no one personnel officer would probably use, it is

* Full descriptions of these forms, with samples, have been published in the Supplement to THE EDUCATIONAL RECORD for July, 1928; in the *Program for a Study of the Relations of Secondary and Higher Education* (the "Pennsylvania Study"), issued by the Carnegie Foundation, 1928; and in an article on the Pennsylvania Study by Dean McConn of Lehigh University, in the *Bulletin of the American Association of Collegiate Registrars*, Vol. 5, No. 2, reprinted for distribution by the Carnegie Foundation.

perhaps desirable to have published an inclusive card of this kind rather than a simpler one. In fact, one of the most beneficial results of the studies of this sub-committee lies in the fact that taking the all-inclusive card, which has been prepared as a point of departure, scores of institutions have prepared personal record cards more exactly adapted to their own needs than they could possibly have done without the American Council card as a model.

The Sub-Committee on Achievement Tests has worked in close cooperation with those in charge of the Pennsylvania Study, partly on account of the fact that Professor Wood bore a close relation to that enterprise. Tests have been prepared on the subject matters of Economics, Government and Civics, European History, Ancient History, Solid Geometry, Trigonometry and Italian. These tests, for the most part in two forms have been published by the World Book Company and are now available for use.

Doctor Robertson, as Chairman of the Sub-Committee on Personality Measurement has labored with his associates upon a project which all recognize as impossible of solution at the present time. When the sub-committee started operations there were literally hundreds of personal rating scales which seemed to assume that one individual possessed a knowledge of those whom he was rating only slightly less intimate than that possessed by an omniscient being. On most of the rating scales no space was provided in which to confess lack of knowledge or the origin of such information as one possessed. Consequently, the most important function of the Sub-Committee on Personality Measurement has been to cultivate a critical attitude toward the device that they were attempting to develop. They have prepared what seems to be as sensible and scientific a rating scale as is possible with our present knowledge. At any rate, the information which is requested is supposed to be based upon fact rather than upon a hazy and purely subjective impression.

Doctor Mann, as Chairman of the Sub-Committee on Occupational Information, has sought to determine the method of developing an occupational monograph which may be of

interest and value to students who have the occupation in question under consideration as a possibility for their life work. Monographs on the subject of medicine, library service and banking have been prepared. Just how far it will be possible to carry this lead is at present under discussion.

The Sub-Committee on Personal Development as an exploratory operation has attempted to obtain some light on the influences that operate during the college experience to affect character development. One hundred and fifty seniors in three institutions were interviewed for two hours each by Mrs. Esther Lloyd Jones, in order to determine what seemed to them to have been worth while in their college experience. The results of these interviews have been written up and it is hoped that they will be published in connection with the report of the Central Committee on its entire accomplishment.

As the time drew near for the expiration of the three years for which the subvention had been granted the committee considered the desirability and possibility of continued work in certain of the five directions mentioned above. The membership of all the sub-committees in conference in Princeton, April 25, 1930, discussed this question as thoroughly as they could, and decided that although their interests extended in many directions, it was possible to prepare a more definite program for the preparation of achievement tests adequate in number and sound in construction than for any of the other projects.

The average member of a school or college staff scarcely realizes the amount of time and money that is required to prepare achievement tests in a sufficient number of forms to meet the demand for such tests over a term of years. Experience has shown that proper tests may most economically be constructed in five equivalent forms. The minimum steps required by good practice for producing five equivalent forms of a 200-question test are the following:

1. Survey field to be covered.
2. Construct 1,500 questions.
3. Edit these, eliminating about 300 questions by inspection.

4. Print five 240-question lists, as nearly balanced in subject matter and as nearly equivalent in difficulty as possible, by inspection.
5. Administer each of these lists to about 500 representative students, giving them in pairs, to the same students, e.g., AB, AC, AD, AE.
6. Score the 2,500 preliminary question lists.
7. Analyze the difficulty and validity of each of the 1,200 questions.
8. Choose 1,000 best questions.
9. Divide 1,000 into five balanced and equivalent tests, i.e., Forms A, B, C, D, E.
10. Administer again in pairs to insure equivalence, to test reliability and validity, to correct and complete keys, and to secure adequate norms.

The Central Committee proposed to the General Education Board the organization of a test producing bureau which should be financially supported by the General Education Board for a period of ten years, after which time it is hoped that it will be self-supporting. To this end a subvention of $500,000, extending over the ten years, was requested and granted. It is anticipated that this amount of financial support will enable the committee to prepare new type tests in the various subject matters of the last two years of high school and the first two years of college. The work of such a bureau naturally falls under three departments: first, the editorial department, which has to do with the gathering of material and the organization of this material into tentative tests; second, a clerical and scoring department, whose function it is to calibrate the tests after preliminary trials in selected schools; third, the statistical department, which should study the results of the tests in order to find out whether they accomplish the results for which they are intended. It goes without saying that preliminary to the work of the editorial department it is desirable and necessary to determine the kind of result which the tests are supposed to measure. The statistical department is not intended as a research enterprise, but merely as a technical necessity, in order that the bureau may assure itself of the quality of its own products.

Professor Ben D. Wood of Columbia University has been

appointed as Director of the Test Service. An organization has been completed with headquarters in New York but with cooperating scholars in universities scattered all over the country. It should be clearly understood that the Central Committee has no illusions concerning the scope of its task. It does not assume that tests of the new type are the only kind of examination that should be given. In fact they hold an opinion diametrically opposed to this. At the same time they are of the opinion that here is a definite and clearly thought out project which can be carried through and which will be of tremendous aid to the cause of education both in schools and colleges. There is no question that the ordinary essay type of examination, the comprehensive examination and the oral examination are all important, and probably test aspects of accomplishment which the new type examination does not touch. This fact, however, has no bearing upon the desirability of having good new type tests in sufficient number to serve the purposes of schools and colleges that need such tests. It is anticipated that the results achieved by the tests which will be prepared may furnish material for investigation and research as to the precise phase of intellectual accomplishment measured by these and other kinds of examinations.

The committee feels very keenly certain dangers which beset the enterprise for which they have taken the responsibility. The items put into a test are definitely related to the objectives of school work in the subject in question. If a test is widely used it will tend to affect very profoundly the work done in schools both in content and in method. The situation certainly demands that those who are responsible for the selection of test items must be unassailable in their standing and ready to make full and adequate defense of their choice of items in terms of as clear objectives as it is possible to frame. This involves a breadth and competency of criticism which it will be difficult to secure, but which is absolutely essential if the tests are to be useful to the extent that one might wish.

It would indeed be fortunate if we could express in definite

and exact language just what schools and colleges aim to accomplish through the medium of the various subject matters of history, mathematics, English and the rest. To find objectives for our educational endeavors that everyone would accept is an alluring enterprise, and if successful would solve many of our difficulties. If this could be done it would be far simpler to prepare tests that measure progress toward these objectives. We could in that case determine with much greater precision than we can at present precisely what any type of examination measures and what it does not measure. In that situation, however, if we all accepted the same objectives, everything would be clear, rigid and completely standardized. If the objectives were wisely selected a stabilizing influence of tremendous significance—and danger—would be developed.

One cannot help asking, however, what happens when the attempt is made to frame fixed and definite objectives in any of our usual subjects of instruction. So far as my observation or information goes it has always resulted in endless discussion leading either to a compromise "so broad that it is flat," to quote President Faunce's expression, or to dicta from arm-chair philosophers so far from actual contact with the human touch of the teaching process that they do not contain much of actual value.

In fact, like so many puzzling problems connected with our educational enterprise, it seems to come down to a matter of the temperament of the investigator. Some men are preeminently thinkers, the results of whose meditation are seriously cramped by too intimate contact with facts. Men of this stamp can think up objectives that may be stimulating, but which need checking against actual conditions before they can be adopted. Other men find their objectives by doing the job. They can follow a scent while on the run. Each type of temperament needs the stimulation and help of the other in order that the most rapid and well-directed progress may be made.

So far as the Cooperative Test Service is concerned, objectives are needed. But it must never be forgotten that we

are examining boys and girls who have been taught by teachers and texts and schools as they are, rather than as they would be in a perfect state. It is no solace to a man who has bought an ill-fitting garment to tell him that it would fit Apollo Belvedere perfectly.

The Service has many delicate questions to solve. But the extent to which it has been able to gain the cooperation of able scholars and investigators all over the land gives bright promise for a useful existence.

H. E. HAWKES,
Columbia University.

Committee on Problems and Plans in Education

THE July number of the EDUCATIONAL RECORD recorded the action of the American Council at its meeting in May, 1930, creating a Committee on Problems and Plans in Education. The considerations which led to the creation of the Committee are outlined in the same issue by the Chairman of the Council, Dean Charles H. Judd, in an article entitled "A National Program of Educational Research." The committee has been organized with the following membership for the year 1930–31: Chancellor Samuel P. Capen, Chairman; Dr. Charles R. Mann, Secretary; President Lotus D. Coffman, U. S. Commissioner William J. Cooper, Dean Herbert E. Hawkes, Dean Charles H. Judd, Dr. John H. MacCracken, Dr. Beardsley Ruml, Dean William F. Russell, Dr. Eugene R. Smith, Dr. Henry Suzzalo, Dr. Edward L. Thorndike, and Superintendent David E. Weglein.

A preliminary conference was held at Hanover, New Hampshire, August 29–31, at the time of the meeting of the Social Science Research Council and arrangements made for the calling of the first regular meeting of the committee at Briarcliff Manor, New York, November 21–22.

Twelve members of the committee were present at the two-day session. An entire day was given to the consideration of the definition of the fundamental terms "the individual," "society," and "education," and to the attempt to formulate a tentative procedure for the evaluating and classifying of projects in educational research.

A provisional memorandum prepared by a sub-committee consisting of Dean Russell and Dr. Mann was made a part of the record of the meeting in order that it might receive further study and consideration at subsequent sessions. The memorandum suggests that projects be classified in one of three great fields regarded as being coordinate and fundamental:

I. Those concerned chiefly with the human being as he grows and unfolds chiefly from within;
II. Those concerned primarily with modern life and the collective or cooperative life in which the individual must find a place;
III. The school and educational processes which help or hinder human beings in the life which they live.

Of each project the question must be asked:

a. To which of these three sub-divisions does it belong;
b. If the project is undertaken will the results fill a gap in present knowledge;
c. To what degree is the problem possible of solution by the instruments and techniques which we possess at present;
d. What would be the cost;
e. What are the best possible agencies for doing the work.

Three sub-committees were created:

1. A joint committee composed of four members appointed by the Problems and Plans Committee and three members appointed by the Social Science Research Council to study the problem of the organization and administration of state school systems. An appropriation was made to cover the expenses of meetings of the committee. The committee is as follows: Dr. A. B. Meredith, New York University, Chairman; Dr. Frank W. Ballou, Superintendent of Schools, Washington, D. C.; Professor George S. Counts, Columbia University; President George F. Zook, University of Akron, representing the American Council on Education. Representing the Social Science Research Council, Professor L. D. White, University of Chicago; Dr. Lent D. Upson, Bureau of Governmental Research, Detroit; Dr. Luther H. Gulick, New York Bureau of Municipal Research.

2. A committee to consider the possibility of organizing a cooperative investigation of the genetic series of intellectual growth with particular emphasis on the processes at the high school and college level. The committee was instructed to

communicate with all institutional members of the Council for the purpose of finding out what work in this field is already under way, and as a result of their findings to draft a plan for cooperative study of the problems in this field and to call a conference of specialists on these subjects, if deemed necessary, to assist in formulating the plan for submission to the general committee. The committee was composed of Dean Charles H. Judd, Dr. Beardsley Ruml and Dr. John H. MacCracken.

3. A sub-committee was appointed to study the impact of the present social, political and industrial organization of society on the educational processes and the educational implications incidental thereto, and to report their findings for the orientation of the committee at its next meeting. The committee consists of Dean William F. Russell, Dr. Charles R. Mann and Dr. Beardsley Ruml.

Dean Hawkes presented a report on the work of the Council's Committee on Personnel Methods, with particular reference to the Cooperative Test Service just organized with Dr. Ben D. Wood as Director, and the relation of the test service to the total problem of personnel methods. Discussion followed regarding the areas mapped out by the Committee on Personnel Methods in which no studies have yet been undertaken for lack of funds, and the committee voted that the Committee on Personnel Methods be requested to formulate an integrated plan of study of personnel problems for presentation to the Problems and Plans Committee.

A communication from the American Association of University Professors expressing a desire to cooperate in carrying out projects appropriate to their organization was presented. Three possible projects were suggested as the subjects in which the Association was at this time particularly interested: Academic appointment and tenure, research in teaching load, and training of college teachers. The committee voted to refer the communication to Dr. MacCracken with instructions to confer with the American Association of University Professors and with others interested in the

general problem of college teaching and to report recommendations on this subject to the committee.

April 11, 12, 13, 1931, were tentatively set as the date of the next meeting, the place of meeting to be determined by the Chairman and Secretary.

As stated at the annual meeting, the expenses of the Committee on Problems and Plans in Education, for at least three years, will be covered by a subvention granted to the Council by the Rosenwald Fund. It is generally agreed that this establishment of a central planning office for educational research in the American Council, where its activities are under control of the institutions themselves, is an important correlative to the increase of research activities in the Federal Government, as experience indicates that the most fruitful results of research and intellectual guidance are secured when federal agencies cooperate with voluntary agencies in the same field.

Suggestions of specific projects of research for consideration by the committee will be welcomed and may be sent to the Secretary at 744 Jackson Place, Washington, D. C.

JOHN H. MACCRACKEN,
Washington, D. C.

The Improvement of College Instruction Through Educational Research*

WHEN a present-day student of education speaks of the improvement of college instruction he may imply any one of a number of things. Reference may be to a more satisfactory selection of curricular content, to a clarification of teaching objectives, to a more accurate method of measuring student achievement, to the elimination of wasted time, to the incitement of greater interest and activity on the part of students, to a better grouping of students for instructional purposes, to a more effective organization of teaching materials, to better classroom techniques. Never does he mean that invocation of magic which academic teachers so frequently ascribe to their colleagues who essay to offer "methods courses." He knows better than do his critics the insidious beguilements of educational theorizing, and he would fly from superficiality and superstition as quickly as would the hardiest physicist.

So true is this that many men in education have all their lives avoided coming to terms with the problem of classroom techniques. They have studied psychology, or educational finance, or administration, or school organization, or comparative education, or the curriculum feeling all the while that the heart of the educational problem lies somewhere in the teacher-student relationship, but knowing also the baffling intrinsic difficulty of this central issue. Their manner of approach has been through an attack upon the marginal problems of instruction more amenable to analysis and experiment, and in this indirect way they have found plenty to occupy their attention. Here have been developed the techniques of educational investigation. About these problems has developed such educational literature as we have.

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Despite this chariness of educationists to attack directly the problems of instruction, we are all well aware that, when we speak of the "improvement of instruction," the phrase must always denote an influence of the instructor upon their facts and skills for more effective use, are stimulated to more active search for knowledge, and extend their range of interests. The criterion of effective instruction is always to be stated in terms of alterations in student conduct. The evidence of improved instruction is ever to be found in the increase or acceleration of desirable changes in student behavior and accomplishment.

It follows from this view that if instruction is to be improved the instructor must change his own activities so that his students are more helpfully stimulated and directed—influenced, as we say. He ceases to do useless things; he does other things more helpful. This changing of his own conduct on the part of the instructor constitutes for him a process of learning. He, too, is a learner, not primarily of the subject matter which he essays to teach, although he will be that too, but of human behavior as it appears in those who make up his class. Over and beyond the materials which he sets for their learning, he must increasingly understand the ways in which this material is received by them and wrought into the stream of their mental lives.

This is not said to state something new. Rather it is intended to revive in our thinking a very old and commonly accepted proposition. It is the sole value of experience which we so generously laud as the perfecter of teaching skill that through experience a teacher learns to desist from useless activities on his own part, and does other things more conducive to student learning—does them with less waste, more frequently, and more persistently.

The present import of this well-known fact is that it identifies the point of incidence toward which all our efforts to improve college instruction must converge. Unless college teachers can and will change their conduct of teaching, no improvement of college instruction can occur. All that college administration can do in this matter is to create about the

individual teacher such influencing conditions as will suggest and facilitate desirable changes in his activities. It can do little, if anything, directly to improve instruction. Only the teacher of mathematics himself can improve the teaching of mathematics. His is the key position; his is the final responsibility for good or poor teaching. If anyone can bring to an instructor new knowledge about teaching, stimulate his interest in teaching problems or provide him with methods by which he may study his own techniques and the results of his instructional efforts, such a person may assist an instructor to self-improvement. But it should never be forgotten that genuine improvement is a process of internal adjustment and growth on the part of the instructor. Good teaching, like other forms of art, is an expression of personality and will not be accomplished through the imitative adoption of devices proffered by external authorities. The crucial question to be asked, therefore, by any one who seeks the improvement of college instruction is this: Through what means can college teachers be made more sensitive to the subtle and delicate psychological processes involved in human learning, how given a better sense of the differential values of curriculum content; how stimulated to a greater interest in student welfare, how informed as to the varying effectiveness of their own instructional activities? Such a question strikes deep into the structure of the teacher's own personality, and it is in this fundamental realm that we must seek for genuine improvement rather than in the surface accretions of teaching tricks.

It may be at once admitted that neither educational philosophy nor educational science has any guaranteed precription to accomplish the purpose thus described notwithstanding the ambitions of some educationists or the fear of the academicians. There are doubtless many and diverse routes to such a happy end, and in the long history of college teaching they have all been traversed by one or another finally competent individual. Though we have in mind to propose a definite program of attack upon the problem of instructional improvement, it is done in the clear realization

that it may cherish no claim to exclusiveness even though it aspires to a kind of superiority.

It is the thesis of this discussion that cooperative research on the part of a college faculty into the problems of college education may eventuate in decided improvement in college instruction. In support of this proposition, I have been asked to detail certain experiences which we have had at the University of Minnesota in recent years. For almost a decade the writer has been chairman of an all-university group appointed by the president of the University and called the Committee on Educational Research.

Its membership of a dozen persons has been largely drawn from the deans of the several colleges and a small group of interested professors, all of whom accept their places on the committee voluntarily. The personnel of the committee has changed only by resignation from the University. The committee's status is extra-legal, as it were, holding no allegiance to any college administration nor to any faculty. In the years of its existence the committee has carefully abstained from the assumption of any administrative obligations. Its function has been to study the problems of the University and to publish its findings. Such changes as these results have implied have been left to other agencies for execution.

It would not be true to say that in the beginning any of us anticipated all of the helpful relationships which have grown out of the work of the Committee. Our initial efforts were timid and sporadic. As projects developed out of the discussions of this Committee, it was possible to enlist the aid of individual instructors in the work of subcommittees. As these committees have been formed they have usually contained one or two men from education and psychology and from three to ten instructors from other departments of the University, the majority always lying with the non-education faculties. The individuals have been drawn from the professional groups as well as from the liberal arts college. The names of cooperating departments will give a vivid picture of how widely interest has been distributed. They are as follows:

Administration
Agriculture
Anatomy
Biochemistry
Civil Engineering
Dentistry
Economics
Educational Administration
Educational Psychology
Elementary Education
Engineering
English
History
Home Economics
Journalism
Law
Library
Marketing
Mathematics
Mechanics
Municipal and Sanitary Engineering
Botany
Business
Chemical Engineering
Chemistry
Nervous and Mental Diseases
Nutrition
Obstetrics and Gynecology
Pathology
Pediatrics
Physical Education
Physics
Physiology
Physiological Chemistry
Plant Pathology
Political Science
Psychology
Romance Languages
Secondary Education
Sociology
Speech
Surgery
University Health Service
Zoology

The list of projects will give an idea of the area over which our activities have ranged. They are:

1. Student Personnel. (More than a score of separate studies.)
2. The Efficiency of Instruction in Classes of Different Sizes.
3. An Analysis of the Marking Systems in Vogue at the University of Minnesota.
4. The Educational Value of Extra-Curricular Activities of University Students.
5. Alumni Contacts.
6. The Mental Hygiene of College Students.
7. Dissemination of Research Information.
8. Vocational Guidance for Women.
9. Training for Outdoor Leadership.
10. The College Teaching of Science.
    (*a*) Laboratory Instruction in Human Anatomy.
    (*b*) The Value of Laboratory Instruction in Human Physiology.
    (*c*) The Value of Laboratory Instruction in College Physics-Mechanics.

(*d*) The Effect of Class Size in College Physics—Heat.
(*e*) Some Determinants of Achievement in College Physics—Magnetism and Electricity.
(*f*) A Study of Prognosis in College Physics.
(*g*) A Study of Prognosis in Human Anatomy.
(*h*) Laboratory Instruction in College Chemistry.
(*i*) The Value of Prerequisite Courses in College Botany.

11. The College Teaching of the Social Sciences.
12. The Reading Problems of College Students.
13. Comparative Scholastic Standing of Athletes.
14. Prerequisite Courses.
15. Student Self-Appraisal.
16. Cooperation in the Land-Grant College Survey.
17. The Characteristics of Superior College Teachers.
18. Instruction in Clinical Medicine.
19. Freshman Failures in Mathematics.
20. Problems of Student Employment.

The spirit of the Committee's work has been one of inquiry. Here is an important problem needing investigation: the best possible scientific techniques should be used in its solution; new methods must be invented if necessary, and the study carried through to a point making it worthy of publication as a valuable contribution to our knowledge of college education.

It is clear that only a portion of the projects listed here have any obvious contingency upon the problems of college teaching. There is ample material, however, to exemplify the thesis which has been advanced. I shall choose for such illustration from completed and published studies. It will be convenient to present the data in refernce to certain subsidiary queries anent the improvement of college teaching.

Is it useful to a college teacher to have a clear perception of the degree to which his students acquire the material he essays to teach them? If it is, then our studies have made a substantial contribution to the improvement of instruction in the University. First reference may be made to studies on the effectiveness of instruction in classes of different sizes carried through largely under the direction of Professor Earl Hudelson. This comprehensive investigation, now in book form, has already received such wide publicity as to obviate detailed discussion here.

It involved fifty-nine fully or semi-controlled experiments involving 108 classes under twenty-one instructors in eleven departments in four colleges of the University of Minnesota. The experiment involved 5,879 students—4,025 in large classes and 1,854 in small. Direct man-to-man comparisons were made upon 1,288 pairs of students, carefully matched as to intelligence and scholarship. The final criterion was student achievement as measured by tests and examinations most of which were objective.

In forty-six of the experiments, or 78 per cent, a more or less decided advantage accrued to the paired students in the large sections. Only in the remaining thirteen experiments, or 22 per cent, was there any advantage in favor of the smaller classes. At every intelligence level the paired students in the large sections excelled their mates in the small. Except at the very extreme, where results favored the superior students, the relative gain in achievement was no greater for the higher levels of intelligence than for the lower. It would seem that except in the case of a few exceptionally capable and zealous students, there is considerable waste of intelligence in both large and small classes. At every scholarship level the paired students in the large sections outstripped their mates in the small. The excellent students profited somewhat more from large classes than did their less conspicuous classmates. Large classes seem to have spurred every type of student to higher levels of attainment.

Conclusions.—"Since small classes, other things being equal, greatly increase cost of instruction, they must be justified on other grounds. In the light of the consistent results of this investigation, it would seem that it will be extremely difficult to justify them on the ground of superior student achievement."[1]

Our concern on this occasion relates not to the merits of the class-size controversy but rather to the influence which this extended investigation has had upon the character of educational thinking in the University community. As this investigation proceded, one man after another was forced to

[1] Earl Hudelson, *Class Size at the College Level*, pp. 256–75.

revise his judgment about the usefulness of small classes. This, while important, was less significant than the resulting caution induced in college teachers concerning others of their cherished illusions. Many of these instructors have sought to apply in part the methods of this study to other problems with a resultant clarification of the results of their own teaching.

Is it useful to a teacher to know in accurate terms the degree to which students retain learned knowledge?

In our eagerness that students acquire the content of or courses of instruction, the facts and principles that we set before them, we college teachers are prone to overlook the fact that forgetting is quite as normal a process of the human mind as is the fact of learning. Even with the best of intention and without dereliction as to study habits students find it impossible to retain all that they read or hear and for the moment acquire. The peak of attainment which characterizes the assiduous student at examination time is always much higher than it is at any subsequent period, so easily does nature surrender impressions of a complex and slightly imbedded sort. The facility with which learned material slips away we find it hard to realize, and our teaching proceeds as if learning without forgetting were the whole of the educational process.

Although the phenomenon of forgetting is of the deepest moment to educational procedure, it has been given but little scientific study and almost none at the college level. As a consequence we blunder in our methods and our judgments, blindly striving against natural forces that we should make our allies, or, at least, not treat as perverse enemies. One of the commonest results of our ignorance is the tendency to expect that students remember far more than they do from the courses which they have previously studied. We proceed with course X as if the student were really in possession of the material which we assume was given in course pre-X. In time we discover that this is not the case and then realize that much of our own instruction has gone astray because of our false assumption. Again, in our own teaching we fail to

realize how little that we offer the student he will really acquire in any permanent form because he will forget our instruction just as he did that of the instructor who preceded us. Some appreciation of this phenomenon we should all have, and some objective knowledge concerning it should be accumulated in reference to all our courses. A small contribution to the problem has recently been made by Dr. Palmer Johnson, a member of our staff. With his permission, I shall present certain of his data at this point.

The problem upon which Dr. Johnson worked is concerned with the nature of prerequisite courses. Specifically he investigated the relationship of courses in elementary botany to sequent courses, particularly to courses in agriculture and forestry. As a part of this study he found opportunity to study the permanence of learning in elementary botany. The Department of Botany had for some time been measuring the achievements of its students by means of objective examinations given as the final examination at the close of each college quarter. For the year 1926–27 the total for the three quarter examinations amounted to 587 different test items. These items covered, as did the content of the course, the subjects of comparative morphology, histology, algology, cytology, morphology of flowering plants, mycology and physiology. The test items were in the form of true-false and completion questions.

From among these 587 test items Mr. Johnson selected 265 items for a re-test examination to be given to the same students at the opening of the Fall Quarter of the year following that in which they had taken the course in elementary botany. By very careful and somewhat elaborate statistical studies he determined the measuring value of each of these items and combined them in an examination of two hours length. The students to be tested were to be found in sequent courses in forest mensuration, silvics, agricultural biochemistry, phytochemistry, soils, fruit growing, principles of genetics, plant pathology and farm crops. Between the time of the re-test and the dates of the initial examinations there had elapsed three, six, and nine months for the several parts of the test.

The study sought to give answer to the question, "How much of what students know on a final examination in elementary botany do they retain for a period of three, six, and nine months?"

All of us would expect considerable forgetting over time intervals as long as these, but few of us are prepared to learn that the loss of knowledge is as great as it is. The mean score at the close of the course was 207.4 points; three months later the same students scored 117.3 points, thus suffering a loss of 43 per cent of what they knew at the end of the course. For another group of students the end of the course score was 141.8 and six months later it had dropped to 74, showing a loss of 47.8 per cent.)

By the further courtesy of Mr. Johnson I offer here two figures graphically portraying these results. Figure I shows for each of twenty-four students a picture of what he was able to do in immediate recall, the upper bar; and his reduced attainment after the lapse of time, the lower bar.

Figure II gives the median scores and interquartile ranges on the 265 items examination for pre-test, immediate recall and delayed recall at three, fifteen, and twenty-seven months after completion of the one-year course in elementary botany.

It appears that the normal retention of the amount learned in elementary botany is but little more than 50 per cent. Almost half of the hard earned acquisition has disappeared within a period of from three to six months. When one interprets these data, it must be borne in mind that the students tested had elected botany and had elected to do their major college work in fields for which botany is regarded as a genuine prerequisite. They can hardly have been taking it as an indifferent means of earning college credits. We may, therefore, presuppose as real an interest in the subject as college students are likely to show in any beginning course.

The data reported in Mr. Johnson's study are too restricted for any broad generalization in the matter of college instruction, and it is due him to say that he offers no such escape from the laborious task of further investigation. The sub-

stantial character of what he has discovered is of sufficient moment to give us pause in some of the assumptions commonly made by college teachers. You are teachers of second year courses. What do you expect your students to know of the work of the first year when they come to your course? Have you any reason to believe that your assumptions are justified by the facts, or that they are even in reasonable conformity to the essential nature of the human mind in its learning and forgetting aspects? What guaranty do you offer that what students learn from you will become a permanently useful bit of knowledge or skill? Are you reasonably certain that you are not making assumptions of knowledge too great and thereby lessening the effectiveness of your own teaching? The obvious reply to all such questions is the admission of ignorance unless you possess some power of devination withheld from the mass of college teachers or unless there are researches in the lietrature which I have been unable to locate.

One safeguard against forgetting is the practice of relearning and over-learning commonly employed by good teachers in all the fundamental processes of education. It is not enough that a student give just sufficient attention to a fact or a bit of skill that he may reproduce it on examination day. A fact which hovers just above the threshold of memory at one moment will likely be below that threshold in a few hours, and much below it in the course of a few days. If the fact is to be irrevocably fixed in memory, it must be brought back again and again through a long period of time, relearned, if necessary, and over-learned certainly, lest it subtly steal away from the grasp of the all too plastic nervous system.

Some of this relearning should obviously be directed by the instructor who first presents a fact to a student. If the fact is genuinely important, then he must guarantee to the student the possibility of repeated and frequent contact with it. It is his obligation to set the instructional stage so that the essential repetitions shall occur. It is not enough, for instance, that the teacher of anatomy shall present the essential facts

of body structure through the lecture and the laboratory. He must provide for the repetition of these facts until they are wrought into the memory of the student so that the lapse of time will not efface them.

Just here I would say a word concerning the distributive obligations of instructors in sequential courses. A very common plaint of instructors in the later courses of a sequence is that students are illy furnished with the assumed contents of previous courses. I sometimes wonder that this type of criticism is so often in the reverse order, for, in the field in which I am most at home, the judgment would seem quite as reasonably to lie in the opposite direction. The implication is all too frequent that the instructors in these prerequisite courses have done their work badly. This may often be true. But may it not also be true that the instructors in the later courses have an obligation that stretches backward to courses previously taken? Thus, is it not fair to expect that teachers of pediatrics will utilize in their instruction all that the teachers of anatomy, and physiology, pharmacology, pathology, zoology, chemistry, physics, and mathematics have labored to provide the student of pediatrics. Unless the teacher of pediatrics calls up in his instruction all the rich body of factual knowledge and principles taught by the laboratory courses, it will, of course, have been taught in vain. To put the matter differently, the teaching of anatomy is not the business of the instructor of anatomy merely. To be sure, his is the initial task; but the successful fruition of anatomical teaching is the work of the whole series of instructors whose contact with the student follows his. Relearning again and again the essential facts of anatomy in varied and changing contexts, the student may come in time to be their master, his knowledge the outcome of many instructors through several years.

Is it useful for a college teacher of elementary science to have a clear understanding of just what the individual laboratory work of a student adds to his possible acquisitions from lectures, demonstrations, quizzes, and readings? May I first

quote upon this matter one of my colleagues, Dean E. M. Freeman, himself a scientist of distinction.

Since the scientific method has been so universally accepted, it has also been quite generally taken for granted that all of the scientists' activities are equally sound in value —a most unscientific conclusion. Our science teachers in colleges and universities have a dual rôle: they are, first, scientists and, second, teachers. Do they apply the same scientific method to their teaching that they use in their investigation in science? Have they an experimental attitude toward classroom procedures? There is not much evidence that this is the case. Certainly the published scientific experiments are few in number.

Perhaps the best illustration of this anomalous situation is found in the commonly accepted use and the prevailing estimate of the value of the laboratory method in the teaching of science. Now the laboratory method has been a most effective one for advancing our knowledge in the sciences. It is unquestionably the foundation stone of scientific investigation. But does it necessarily follow that success in the teaching of science can only, or even chiefly, be obtained by the laboratory method? That such a method of teaching science is actually superior requires scientific proof.

Modern conditions in our colleges and universities have brought rapidly increasing demands on the time and resources of teachers of science. The tremendous expansion of human knowledge has increased and complicated the curricular requirements of colleges. Large bodies of students and necessary economies in administration and teaching resources call for close scrutiny of expenditures and the greatest possible efficiency. Science teachers are becoming acutely aware of the fact that savings in time and resources gained through cheaper and more effective teaching may leave greater opportunities for research.[2]

In keeping with this view, a number of our best teachers in science have cooperated in experimental studies of the use-

[2] Archer Willis Hurd, *Problems of Science Teaching at the College Level*, Introduction, pp. 1–2.

fulness of the laboratory. One such study, by Dr. Victor Noll, covering three years of investigation in the field of chemistry, has now appeared in book form. The method was that of parallel sections, under controlled conditions, with the number of variables reduced to the lowest possible number. From year to year the method was varied to test out different factors. The achievements of students were measured in numerous ways and always by reliable objective tests. The results of the experiment can best be given in Dr. Noll's own words:

When two groups were compared, one of which had had five hours of laboratory work per week, the other having had three hours of laboratory work and two hours per week of outside reading on assigned topics in chemistry, the former group showed consistent superiority on all measures of achievement used. Although none of these differences was certainly reliable, several (particularly those brought out by TCA scores) were almost three times the standard error of the difference.

Comparisons of the two groups, one having five hours of laboratory work per week, the other having three hours of laboratory work and one hour of recitation or oral quiz per week, showed the latter group to be superior to the majority of cases, although never by a significant amount. These two groups were studied over a period of four quarters of instruction in chemistry, two quarters being in general inorganic chemistry and two quarters in qualitative chemical analysis.

Comparisons of two groups, one having five hours of laboratory work per week, the other having three hours of laboratory work per week, showed the former group to be consistently superior in mean achievement and almost as consistently the less variable of the two groups. None of these differences proved to be significant. Because of the presence of certain other factors not held constant, the cause of this superiority is left somewhat in doubt. Available data on the effect of greater interest in the subject of chemistry indicate that the superiority of the five-hour laboratory group may be due as much to the factor of interest as to the additional laboratory work.

Comparisons of groups supposedly differing in interest or motivation for the subject of chemistry showed the group majoring in chemistry to be consistently superior in achievement as measured here, although none of the differences was certainly reliable.

As far as any measures used in this study are concerned, two hours of laboratory work out of five per week do not seem indispensable. The fact that students can be deprived of these two hours without significant loss would appear to be rather important evidence on this point. As for substitutes for laboratory work, of the two that were tried, recitation or oral quiz seems to be a fairly profitable substitute, but outside reading does not. It may be that a different plan for the outside reading or a different selection of topics would show results different from those found here.

Oral quiz and recitation seemed to be somewhat more effective than laboratory work during the experimental period, and apparently the salutary effect carried over to sequent courses. This seems to be a rather important fact from the administrative point of view. It needs further experimental verification before being accepted unqualifiedly.

With two of the experimental groups compared, a follow-up study was made of the achievement of these groups in sequent courses in chemistry over a period of two quarters. There was no evidence in this study to show that the group that had been given one hour of recitation in place of two hours of laboratory work had lost anything because of this substitution.

I shall give one further illustration, this time in the field of curriculum revision. For many years we have offered in the College of Education a group of courses required for all prospective high school teachers. These courses amounted to a requirement of twenty-five quarter credits. About six years ago, one of our instructors, Dr. W. E. Peik, undertook an investigation to determine the usefulness of this requirement. He secured all the texts, syllabi, reading lists and examinations used in all the courses and analyzed the material into small items or instructional units. From this analyzed data he constructed a checking list of 814 items. These were then examined to discover the instructional time devoted to each, the cases of duplicated and recurrent treatment, the sequential arrangement, and the answers to other problems. Finally, he submitted the complete list of items in printed form to several hundred alumni who had had the entire offering in our institution. He sought alumni reactions upon five points. Do you remember studying this topic? Has it been of prac-

tical use to you in your work? Has it been useful in your educational thinking? Do you recommend that it be omitted from the requirement? Do you advise expanded treatment?

The results of this investigation comprise six large typewritten volumes now on file in our offices. The condensed result and method appear in a single printed volume. On the basis of this study we have already made important changes in this curriculum and others will follow.

The method of Dr. Peik, with some enlargement, the writer has applied to the whole subject of psychology. Using an analysis of fifty texts, and with the cooperation of our colleagues, we have compiled a checking list of 2,584 items or topics in psychology that may be used for instructional purposes. There are many uses for such a list, but the selection of curriculum content and the orientation of adequate examination procedure are among the most important. The list has already been used with four hundred college Juniors entering our College of Education in September, 1929. These students are supposed to have had already an introductory course in psychology. On entrance to educational work they were asked to answer certain questions regarding each item in this list. Among other things they were asked to indicate if they remembered having studied the topic and, secondly, if they now understood it sufficiently well to explain it on an examination should they be asked to do so. The responses are illuminating. The data which were divided into groups based upon the institutions in which the junior college work was done show distinct institutional emphasis although there is a surprising range of checked items in every case. More interesting, however, is the student's own discrimination between his memory of once having studied a topic and his assurance of present ability to explain it. Roughly, about 33 per cent of the topics were marked as remembered, while the figure for present understanding is only 13 per cent. The meaning of this marginal 20 per cent of vague and hazy memory is not alone of theoretical interest but a very practical concern of teachers of psychology. However, it is but one of

scores of problems that bristle forth from the pages of tabulation in this study.

One other use we have made of such a list, namely to analyze textbook content.

Three texts, "Psychology for Students of Education," by Gates, "Educational Psychology" by Starch, and Woodworth's "Psychology, A Study of Mental Life," have been checked page for page against the original list and against the combined judgment of instructors. All of these books have wide use in introductory psychology courses for teachers.

The results of this checking reveal: (1) The emphasis differs from book to book. One test devotes 87 pages to instinct and emotion; another, only 12 pages. One allots 99 pages to the nervous system; another only 7. The causes of individual differences occupy 15 pages in one text and only two pages in another. One gives 31 pages to animal behavior; another gives none. Statistical techniques fill 22 pages in one book and are omitted in another. (2) When set alongside expert opinion as to what should be taught, the contents of the several texts reveal varying adequacies. The psychology of play is judged important by 95 per cent of respondents; one text gives it two pages, another one page, and the third omits it altogether. Eighty-five per cent regard memory as important. One text gives it 14 pages, another 6 pages, and the third none. This study should be extended to cover many texts, and, if handled chronologically, would reveal trends in instructional emphasis through the period studied.

One further extension of the checking list technique we are now making in the field of clinical medicine, but explication of this must be omitted. Nor does time permit the elaboration of experiments in the teaching of physics, of mathematics, of German, of English, of law, of industrial chemistry, of the attempt to improve the reading abilities of students the exploration into the causes of student failure, and a score or more of studies in the measurement of student abilities, the construction of reliable and valid examinations and the analysis of the trait of superior college teachers.

However important may be the factual results of these in-

vestigations, they do not constitute the major significance of our endeavors in collegiate educational research. This lies in the altered and altering attitude of the university community toward the understanding and solution of college problems. Sad as it may seem, we must reckon among the serious obstacles to the improvement of college teaching an indifferent, if not hostile, attitude on the part of many college teachers. They simply accept their present teaching competence as adequate and are irritated if it is suggested that their ways may be changed for the better. Numerous influences contribute to this state of mind.

In the first place, it must not be overlooked that few men in any field ever strive for the highest excellence, but are, rather, content with comfortable mediocrity. In the sheltered and non-competitive conditions which surround teaching in American colleges, the external urges to high competence are far from effective.

In the second place, the academic world in America has rather definitely made known its judgment that teaching is second in importance to scholarship, that it ranks definitely below educational administration. With exceptions so rare as to create wonder where they occur, its prizes, its high ranks, its honorary degrees, its lucrative salaries go to presidents and deans, to its specialized scholars, its men excelling in research. A college president will flame with enthusiasm about the importance of college teaching and then will bribe an excellent college teacher into an administrative position by a 30 per cent increase in salary and additional perquisites of office. The difficulty of urging men whose only claim is excellence in teaching and service to students to the highest academic recognition is well known and is not confined to a single institution. The influence of this situation upon college teachers in general, and upon young men in particular, is to make them think of teaching less highly than they should, as something second rate at the most.

A third influence contributing to restrictive attitudes on the part of teachers is the easy emphasis upon dullness in students. If students are dull, they do not learn; it is easy for

an instructor to reverse this formula and to say that if students do not learn, it is because they are dull. Such free association in the teacher's mind makes self-excuse a virtue rather than a sin. Thus a teacher who fails 50 per cent of his students can without self-reproach transfer the blame for such wide devastation to their previous training and to deficient human nature.

A fourth factor making for a *laissez faire* attitude on the part of instructors toward teaching is ignorance of instructional results. No teacher may have more than a partial comprehension of what students acquire from his course. He may over-judge or under-estimate their acquisitions, but educational science has not yet given him a complete and accurate technique for determining the results of his own efforts in terms of student growth and changes. Because of this deficiency, he is continuously in the unhappy state of judging his own teaching competence in ignorance, often wrongly without doubt.

Admitting that there are these and possibly other factors contributing to an indifferent attitude that tends to insulate the teacher from effective stimuli to his own improvement, it must still be said that no good college can tolerate such an attitude indefinitely. While in this state no college teacher will make conscious effort to improve his work, nor could he well do it if he tried. Wherever this outlook upon the problem of teaching is found, the problem of its alteration protrudes as a first and most important matter to be considered. Nothing more definitely conduces to a changed attitude than fair and unbiased research into mooted problems, the cooperative inquiry for factual material bearing upon questions at issue.

While we would place this changing attitude toward college problems as a first fruit of our research endeavors, we are also slowly creating a body of new literature concerning college education, a literature based upon the experimental method and containing factual data. Eight books have already appeared from the University of Minnesota Press;

others are in process of publication.[3] In addition to these major publications there have been a score or more of journal publications. While no claim is made that any of these publications gives the final word upon the matters with which they deal, it is certain that future students of these problems must for a long time give serious attention to the data they contain. Could we have twenty-five years of equally productive work at Minnesota and at other institutions, the whole character of educational discussion in the college field would shift to a new level, the level of factual information and of scientific method.

To be sure, this shift would be a painful process for some of us. We could no longer dispose of profound educational matters in the Phi Beta Kappa orations or the inaugural addresses of itinerant college presidents, those academic counterparts of Independence Day political science. The free flow of educational theorizing would suffer the painful limitation of being hampered by facts but who doubts that such restriction would be a distinct gain to our college students even though it make academic shades less alluring to certain types of present day college professors?

What we have been trying to do at Minnesota other insti-

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[3] "College Problems Series": F. Stuart Chapin, *Extra-Curricular Activities at the University of Minnesota* (1929); Earl Hudelson, *Class Size at the College Level* (1928); Archer Willis Hurd, *Problems of Science Teaching at the College Level* (1929); Palmer O. Johnson, *Curricular Problems in Science at the College Level* (1930); Victor H. Noll, *Laboratory Instruction in the Field of Chemistry*; W. E. Peik, *The Professional Education of High School Teachers* (1930); Earl Hudelson (editor), *Problems of College Education* (Contributors: E. M. Hopkins, L. D. Coffman, M. E. Haggerty, A. J. Klein, E. C. Elliott, F. Engelhardt, D. J. Cowling, R. R. Price, G. S. Ford, L. V. Koos, J. M. Wood, D. A. Robertson, R. M. West, J. B. Johnston, E. H. Wilkins, D. G. Patterson, W. S. Miller, S. Blanton, F. M. Rarig, H. S. Diehl, A. D. Blitz, F. S. Chapin, E. Hudelson, H. A. Erikson, E. M. Freeman, C. M. Jackson) (1928).

In Press: John E. Bohan, *Student's Marks in University Courses*: Alvin C. Eurich, *An Experimental Study of the Reading Abilities and Disabilities of College Students;* Alfred Victor Overn, *Indices of Supply and Demand of Teachers in Minnesota*; James Greenleaf Umstattd, *Student Self Support at the College Level.*

tutions are doing in like or different ways. Published material accumulates from many sources, and there are few colleges that could not use this means of instructional improvement to their own advantage.

What do the colleges now have as capital in beginning a program of collegiate educational research? The first item of importance to be noted is that every college has a plant in which all the basic problems to be studied exist. Even the smallest college has its student body, its curriculum, its methods of instruction, its staff, its buildings, its means of support, or the lack of it, its problems of control and direction, its alumni and its interested public. Wherever a college student treads, there arise all the basic educational problems. While certain problems are intensified and complicated in the larger institutions, it is also true that the smaller colleges fairly reek with issues about which little authenticated information is available, and college practices prevail for which there is little or no factual support. It is also true that many of these matters are more easily studied in the smaller and simpler environments. The simplification of experimental conditions is an ever-present drive in controlled investigation, and in some respects the smaller college would seem made to order for the scholarly study of college problems.

Let us note, therefore, as our basic institutional resource for investigation of college education, the existence of the plan from which the problems of college education arise. In this respect the developement of research in the college has an obvious advantage over such endeavors in the elementary and secondary school fields. When college professors of education have sought to examine the problems of the lower schools, they have had to go outside the college walls, to make contacts with an alien administration, or, barring this, to establish, at great expense, laboratory schools on the campus. Diversely, in the study of the college problem the whole machine —the investigator and the thing to be investigated—are under one organization and within the narrow geographical limits of a single campus.

The second resource for the study of college problems is

the presence in the institution of men and women trained in methods of scientific investigation. We may be dealing here with a less universally present factor than in the matter just discussed, but the probabilities are that most colleges are richer in this respect than they may at first think. Experience testifies that, once the idea of investigating college problems arises, aid will be frothcoming from unexpected sources. College presidents and deans are continuously plagued by unsolved problems, and in some cases they have been able to save the time from routine performance to search for the facts upon which wise decisions may be made and constructive educational policies developed. It is quite probable that more of them could do so if the importance of such a line of action should become clear to them. Much depends upon just this clear understanding of the importance of collegiate educational research.

Much, also, depends upon the resolute will of the administrative officer to defend his own intellectual alertness in regard to the understanding of his own problems. The spirit of the dean who said, "I'll be damned if I'll surrender to routine; I am going to study my job as well as perform it," is widely needed, and evidence increases to show that that spirit is growing. An administrative officer with this outlook will add his own mite to needed knowledge, but he will also do something of vastly greater moment. He will make his institution habitable by scholarly students of educational problems and will generate in his faculty a sympathy with educational research. He is likely, further, to find that some members of his staff in the strictly academic fields also decline the "damnation of routine," and themselves set about the examination of their own practices with a consequently increased intellectualization of the tasks which they daily perform, possibly with an enlargement of professional knowledge.

Two reasons prevail for the encouragement of a responsive interest on the part of the academic faculty in educational research. In the first place the faculty is the responsible, and,

in the end, the only effective agent in the improvement of college education. They who are only students of education can, at the best, do little but produce new facts and frequently they can do this only with the cooperation of academic teachers. The latter alone are in a position to make new facts useful in college improvement.

The second reason is even more important, namely, that many of the methods of research useful in the study of education have had their origin and their greatest development in strictly academic fields. Education has done less than some suppose in the creation of new scientific methods but has levied extensively upon the devices and methods of other fields of investigation. This point may be emphasized by an outline of the currently used methods of educational research prepared by the writer with the assistance of his former colleague, Dr. W. C. Olson.

This outline is as follows:

METHODS USEFUL IN EDUCATIONAL RESEARCH

1. Documentary
   a. Historical
   b. Legal
   c. Analysis of current literature
   d. Textbook analysis
   e. Institutional records and reports
   f. State records and reports
   g. Federal records and reports
   h. Catalogs
   i. Courses of study
2. Questionnaire
   a. Fact
   b. Opinion
   c. Simple information
   d. Variable verbal response
   e. Yes or No
   f. Checking
   g. Ranking
   h. Rating
   i. Weighting
3. Rating scales
   a. Graphic (cross on the line)
   b. Order of merit ranking
   c. Man to man comparison
   d. Scale sample comparison
   e. Range of values
   f. Score card
   g. Others—
4. Personal interview
   a. Prepared questions
   b. Unstandardized
   c. Trained interviewers
   d. Untrained interviewers
5. Description and analysis based on
   a. Uncontrolled observation
   b. Controlled observation
   c. Stenographic reports
   d. Verbal analyses
6. Survey
   a. Population
   b. Buildings
   c. Finances

- d. Organization and administration
- e. Teaching staff
- f. Pupil progress
- g. Curriculum
- h. Educational results
- i. Others—

7. Case method
   - a. Individual history
     - (1) Health
     - (2) Social
     - (3) Educational
     - (4) Economic
   - b. Individual examinations
     - (1) Medical
     - (2) Psychiatric
     - (3) Educational
     - (4) Psychological
     - (5) Family history

8. Experimental
   - a. Laboratory
   - b. Classroom
   - c. One group
   - d. Equivalent groups
   - e. Rotation groups
   - f. Learning
   - g. Physiological
   - h. Psychophysical
   - i. ——

9. Bases for equation of groups
   - a. Random selection
   - b. General intelligence
   - c. Status in experimental trait
   - d. Socio-economic status
   - e. Marks in—
   - f. Educational tests—
   - g. ——
   - h. ——

10. Mathematical formulas

The manner in which these methods shoot across the intellectual interest of a college faculty is fairly clear from the mere listing of them. Our Minnesota experience has given us copious illustration of their pervasive character. At one time or another during a five-year period we have had the assistance of men and women from many teaching fields, who have enriched our understanding, not merely of the problems to be studied, but also with clear perceptions of the applicability of methods which they knew better than did we. The individual departments have been given earlier and it should here be stressed that inquiring minds are not confined to any college or university department.

To be sure, some members of a college faculty are more closely in touch with methods useful in educational research than others are likely to be. Among these we may place first the psychologists. The content of currently taught psychology is largely a development of studies made during the past thirty years. It still bears the marks of the experimental method upon it, often the crudities and partiality of a rapidly changing body of knowledge, but, also, it is redolent

with the spirit of investigation. Among the more than seven hundred psychologists listed in the 1928 Year Book of the American Psychological Association more than half indicate an interest in education. Two hundred and six are teaching courses in education and educational psychology, and 238 name these and related matters as their fields of research. If we couple this evidence of interest with the obvious pertinency of the methods of psychology to the study of educational matters, it would appear that here exists a resource widely distributed among colleges for an attack upon the problems of college education, although it would be excessive to claim that all psychologists are assets in this endeavor.

It would be gracious to speak with equal enthusiasm about the possible services of the sociologist, since it is obvious that many of the problems of college education are essentially social in character. The sociologists, however, have made less progress in the adoption of dependable methods of educational investigation than the possibilities and importance of social study warrant. Genuine helpfulness from this cource, already too long delayed, appears to lag except in so far as the methods of the older disciplines are being appropriated by the sociologists.

There is ample ground for belief that the situation is changing. Within the field of sociology itself there is rapidly growing up a genuine interest in the scholarly investigation of social problems by the methods of science. The number of persons so interested is steadily growing, with many recruits among the more recently trained men, and the body of literature from this source is inceasing in volume and quality. The usefulness of an investigator who is sensitive to the social aspects of college education and equipped with the technical training for social research is undoubted. It is a pleasure to acknowledge in this connection the cooperation which we have received on numerous educational studies at Minnesota from Professor F. Stuart Chapin, and in particular, his leadership in the study of the extra-curricular activities of college students.

One would like to say in this connection that the educationists on the college faculty are an unfailing source of aid in the study of college education. Unfortunately, this seems not to be the universal situation. In fact, in some cases, sober judgment ranges them on the side of liabilities rather than elsewhere. The causes for this condition vary. Lack of ability and effective training, and unwarranted presumption of competency on the part of teachers of education, as well as prejudice among academic teachers, play their part. Wherever the educationists have met rigid standards of high scholarship, have proved themselves good teachers and have been wise in service and cooperation, the way is opened for all the skill which they may offer in the study and control of the college problem. In many places they have become, as they should be, the leaders in such endeavor.

It will not be out of place to utter here a useful caution. In the first place, the speaker believes that educationists can best approach the college problem by the way of research rather than by way of didactics. From the viewpoint of sound educational knowledge, the college is a relatively new field. Most of the serious study bearing upon its problems is a product of the last decade, and is antedated by a generation of research in elementary education and to a somewhat less extent by investigation in the secondary field. The material available for instruction in college education is small, partial in character, and relatively unorganized. To assume otherwise is presumption and insincerity. Because of this fact, the educationist is on insecure ground in essaying that his knowledge of college matters exceeds to any great extent that of good academic teachers who have garnered from rich experience a fund of principles and useful traditions. Until college teachers of education learn to improve their own classroom performances, they may well sit in humility at the feet of master teachers in academic fields, one or more of whom almost every college numbers among its present staff. The immediate import of educational inadequacy is that teachers of education should go slowly in offering courses in

college education. It is a doubtful measure of progress that more than twenty-five college departments are now attempting to do just this thing, whereas but a few have a staff trained and equipped for this purpose. Let us have intelligent investigation, as extensive and thoroughgoing as possible, but let us maintain a scholarly conscience in the realm of didactics.

One resource available in the larger institutions is the presence of graduate students—some in education, others in subject-matter fields. Increasing social pressure is certain to impinge upon our graduate schools to recognize the need of professional equipment on the part of college teachers, and the right of graduate students to professional training during the graduate years. One need only cite the recent action of the Association of American Colleges in requesting graduate schools to recognize a situation that is hastening upon them, and the tendency of state authorities to make professional training a requirement for teaching in public junior colleges. The graduate schools in whose faculties the teachers of education have their place must be prepared to guide graduate students both into the available knowledge and, even more important, into the attitude and technical competency to study their teaching and related problems. It is ancillary to this fact that some graduate students may become the most effective agents of a research program.

Quite as important as any technical equipment on the part of individuals is the matter of morale in the college situation. The improvement of college education is based upon the presence of a spirit of good-will among those responsible for such improvement. This means that the academic staff and the teachers of education must enter into a relation of genuine cooperation in the study of college problems. The disgraceful hostility of these two groups in American colleges must be overcome in behalf of the overwhelming problems which they face in common. It is the part of educationists to meet the present unhappy situation with an honest recognition of their own limitations, a genuinely scientific conscience, a

desire to be of service and an epidermis impervious to the cynical jibes and ignorances of some of their academic colleagues.

M. E. HAGGERTY,
University of Minnesota.

Personal Service and Freshman Scholarship

DURING the years 1924–28, the writer developed a student personnel service bureau in a small college in Iowa, the culminating results of which for the year 1927–28 were reported briefly in School and Society and have since been published in greater detail as one of the Iowa studies in education, Vol. V, No. 1. Both methods and the results appeared to be a marked improvement over older methods. However, this service was applied to the entire student body, so no exact comparisons could be made between the academic results achieved by students receiving this service and that achieved by students without it.

In May, 1929, the writer proposed a project in educational guidance of freshmen at the state University of Iowa for the year 1929–30, to be conducted on an experimental basis the result of which could be compared with results attained by the method already functioning through the established services on the campus. As a member of the faculty and as Assistant Dean of Men, it was possible to set up such a project so that it was entirely genuine and lacking in the usual earmarks of an experimental situation. The plan had the approval of the Administration and was supported at every point by faculty and administrative cooperation. The following paper is a brief report of the project:

The experimental group consisted of a group of freshmen men selected at random by the following method: About August 15, after a large percentage of the applicants for admission had sent in their transcripts of high school credits (Part I of Application for Admission), Part II of the Application for Admission, which is a personal information blank, was mailed to each student. The first 125 to return these blanks were taken as the experimental group. During registration all freshmen information blanks, including those of the experimental group, were distributed to registration advisers. Some of the advisers did not return their blanks for

six or eight weeks. Among those not returned were 13 of the experimental group's blanks. Hence only 112 students were actually included in the experimental group. Seven of these left the University of their own volition before the end of the first semester, so only 105 completed credit for the first semester. Four of these did not re-register of their own volition, and one was dropped for poor scholarship. Hence only 100 continued with the work of the second semester. Of these 97 completed second semester credit.

The control group was selected in October after the results of the qualifying examinations were available. These men were selected to pair with the 112 men in the experimental group. The following items were matched man for man in the two groups: (1) percentile rank on the qualifying examination; (2) chronological age; (3) course registered for—an engineer was matched with an engineer, a pre-medic with a pre-medic, liberal arts with liberal arts, etc.; (4) nationality, Jewish with Jewish, etc.

Of the Control Group, 107 completed credit for the first semester; 6 did not re-register of their own volition; 3 were dropped because of poor scholarship, leaving 98 to continue for the second semester. Of these 95 completed credit for that semester.

The number of students in each decile for both groups is shown in each of the tables of results, and the equality of the matching in the qualifying examinations is shown in column 3 of Table IV.

The students in both groups received the usual services of all departments on the campus—registration advice, health service, housing and employment service, and the usual services of the Dean of Men's Office, such as the delinquency reports and consequent advisement, absence records, form letters to parents, etc. The point of difference lay in *the constructive individual guidance given each man in the experimental group without waiting for difficulties to arise to initiate such assistance.* These services are briefly outlined as follows:

1. On September 12, each student of the experimental

group was mailed a copy of the writer's "An Open Letter to High School Seniors," with the accompanying letter:

September 12, 1929.

In large measure your freshman year will be the most important year of your university career. During that year most young men determine their future as students. You will face a multitude of adjustments upon which you will need guidance and assistance.

The Dean of Men's Office is the official adviser of freshman and sophomore men. While of necessity we must give special attention to all emergency cases, we are equally interested in giving our best assistance to all students.

In addition to my regular duties as Assistant Dean of Men, I am going to have time this year to give more complete personal service to about 125 freshman men. These services will include conferences, correspondence, scheduling of time, and coaching in study methods, as well as integrating the many services on the campus about your particular needs.

You have already filled out both sections of your application for admission, which is the first step in getting started right. As a second step I want you to read "An Open Letter to High School Seniors" which I am mailing under separate cover. While this letter was originally designed for students who had not yet chosen to go to college, the six questions discussed should be helpful to you.

If it is at all possible for you to get the ratings by your teacher and superintendent, please do so, and bring the complete letter and rating charts with you when you come in for your first conference with me. Please see me as soon after September 23 as you can. I will be in my office in room 12 basement Old Capitol, every afternoon, after September 23.

Sincerely yours,

LONZO JONES,
Assistant Dean of Men.

Each one's personal information blank had already been received and read, which introduced him to the writer. The letter quoted above was on the nature of a friendly response intended to create an atmosphere of mutual cooperation.

2. The students came to the campus, and participated with the entering freshman class in all events of freshman week.

3. Personal interviews:

(*a*) Between registration and November 1, each student was interviewed by the writer. The objects of this interview were to get acquainted with the student, to discover how he was getting adjusted to his college life, to impart to him something of the personal interest which the Dean of Men's Office had in him, and to offer constructive guidance where needed. A statement which briefly summarized the nature, the purpose and the results of this interview was incorporated in a personal letter to the parents which was written immediately following the interview. Rather than waiting until the student was in scholastic difficulties to get acquainted with him, it was hoped that, by this early contact, difficulties could be obviated or prevented from occurring.

(*b*) Later interviews were had at the students' initiative or at the writer's request and considered any of the many interests or problems of an active freshman.

(*c*) Each student was seen between November 26 and December 16 to report to him, and comment upon his grades for the first nine weeks. A letter was sent to his parents following this interview, commenting upon the student's progress and enclosing his grades.

(*d*) Again, between February 15 and March 1, each student was seen about his grades for the first semester.

(*e*) Those students whose work was low at the end of the first nine weeks or at the end of the semester were seen frequently. Time charts and study suggestions constituted the chief remedial methods proposed in these interviews.

(*f*) Between April 12 and 25, each student was seen again about his continued progress, or lack of it, as indicated on the delinquency reports. Again a letter was sent to the parents at this time indicating the results of this interview.

4. Letters to parents:

The letters to parents at regular intervals following each of the interviews were written with three main purposes in view: (1) to inform the parents of their son's status; (2) to indirectly influence the student through the parents, who would write to him, quoting from the letter; (3) and to establish an atmosphere of cordial cooperation between the

University, the parents and the student. The response of parents to these letters expressing their interest and cooperation reveals an appreciation which in itself is a worth-while result.

5. The time charts, used to reveal to the student and to the writer the amount of time actually given to studying, enabled the writer to advise discriminatingly and the student to schedule adequately the amount of time needed for his studies in order to improve his record. Of the four variables —native ability, time, study methods, and grades achieved— in a student's career he can exercise more control over the use of his time than over any other one. The amount of time recommended was governed by the student's percentile rank, and his scholastic or delinquency record up to the date of the interview.

6. Methods of study were suggested as a remedial measure for those students who were spending adequate time but yet failing to maintain achievement at their level of ability. This variable is also subject to modification and control by the student, but is one in which most students need constructive coaching.

7. Constant comparisons of the student's achievement with his ability, as measured by his percentile rank on the freshman qualifying examinations, were made by the writer to govern interviews and advice given.

8. Cooperation of other student services on the campus, such as housing, health, etc., was had when the student's situation required those services.

Results: The results of the project and the comparisons of the two groups on five significant criteria used are: (1) grade averages; (2) semester hours of A and B grades; (3) semester hours of nonpassing grades; (4) achievement in relation to ability; (5) number of students who completed the year's work in good standing.

1. Grade point average.

When the grades of each student were evaluated in terms of grade points (each hour of "A" equals four grade points; "B" equals three; "C" equals two; "D" equals one; "F"

equals none), the experimental group exceeded the control group at every decile for the first semester, and at every decile except the lowest for the second semester. The entire group made a grade point average for the first semester 22 per cent higher than the grade point average of the control group; and for the second semester 23 per cent higher. Table I shows the grade point averages for both the experimental and the control group (in this and in all the tables which follow, column X will represent the experimental group and column Y the control group), the difference between the two, X — Y, and the percentages of advantage at each decile level. Section A is for the first semester 1929–30, Section B for the second.

The smallest percentages of advantage were made in the

TABLE I

Decile	Number		Grade pt. Average		Difference	% of advantage
	X	Y	X	Y	X–Y	
Section A						
10th	17	17	2.83	2.45	.38	15
9th	12	12	2.76	2.12	.64	30
8th	16	16	2.13	1.87	.26	14
7th	8	8	2.26	1.96	.30	15
6th	11	11	2.03	1.53	.50	33
5th	9	8	2.01	1.61	.40	25
4th	6	6	1.82	1.31	.51	39
3rd	8	9	1.47	1.29	.18	14
2nd	10	11	1.47	1.28	.19	15
1st	8	9	1.46	1.18	.28	24
8–10	45	45	2.56	2.15	.41	19
4–7	34	33	2.04	1.61	.43	27
1–3	26	29	1.46	1.26	.20	16
Totals and averages	105	107	2.12	1.74	.38	22
Section B						
10th	16	16	2.77	2.45	.32	13
9th	12	12	2.77	2.11	.66	31
8th	15	15	2.15	1.63	.52	32
7th	7	8	2.38	1.75	.63	36
6th	11	10	1.98	1.56	.42	27
5th	8	7	2.09	1.74	.35	20
4th	6	6	1.86	1.20	.66	55
3rd	6	7	1.68	1.43	.25	17
2nd	8	8	1.58	1.25	.33	26
1st	8	6	1.30	1.50	−.20	−13
8–10	43	43	2.56	2.07	.49	24
4–7	32	31	2.07	1.58	.49	31
1–3	22	21	1.51	1.38	.13	9
Total and averages	97	95	2.16	1.76	.40	23

TABLE II

Decile	Number		Total hours of A and B grade		Average Hours of A and B grade		Difference	% of gain
	X	Y	X	Y	X	Y	X–Y	
Section A								
10th	17	17	172	113	10.1	6.6	3.5	53
9th	12	12	112	47	9.5	3.9	5.6	143
8th	16	16	63	49	3.9	3.1	.8	26
7th	8	8	48	28	6.0	3.5	2.5	71
6th	11	11	37	7	3.4	.6	2.8	466
5th	9	8	28	11	3.1	1.4	1.7	121
4th	6	6	16	6	2.7	1.0	1.7	170
3rd	8	9	11	4	1.4	.4	1.0	250
2nd	10	11	17	10	1.7	.9	.8	90
1st	8	9	11	4	1 4	.4	1.0	250
8–10	45	45	347	209	7.7	4.7	3.0	64
4–7	34	33	129	52	3.8	1.6	2.2	137
1–3	26	29	39	18	1.5	.6	.9	150
Averages and Totals.	105	107	515	279	4.9	2.6	2.3	89
Section B								
10th	16	16	163	109	10.2	6.8	3.4	50
9th	12	12	119	58	9.9	4.8	5.1	106
8th	15	15	86	38	5.7	2.5	3.2	128
7th	7	8	48	16	6.9	2.0	4.9	245
6th	11	10	49	10	4.5	1.0	3.5	350
5th	8	7	40	8	5.0	1.1	3.9	350
4th	6	6	18	3	3.0	.5	2.5	500
3rd	6	7	15	5	2.5	.7	1.8	257
2nd	8	8	14	9	1.8	1.1	.7	64
1st	8	6	14	2	1.8	.3	1.5	500
8–10	43	43	368	205	8.5	4.8	3.7	77
4–7	32	31	155	37	4.9	1.2	3.7	308
1–3	22	21	43	16	2.0	.8	1.2	150
Averages and totals.	97	95	566	258	5.8	2.8	3.0	107

lower deciles, the levels at which under the present administrative methods in the Dean of Men's Office the most attention is given to the student and where in terms of potentiality the least fruitage in scholarship and its products can be expected. Some comparisons should be noted between various decile levels of the two groups. The experimental group had six deciles with grade averages above "C" for the first semester and five for the second, while the control group had only two for each semester. The fourth decile of the experimental group averaged as high as the eighth decile of the control group. It will be of interest to make other similar comparisons from Table I.

2. Semester hours of "A" and "B" grades:

The total and the average number of hours of "A" and "B" grade were computed for both groups by deciles. Again it was found that the experimental group exceeded the control group at every decile. For the first semester the experimental group averaged 89 per cent more semester hours of "A" and "B" grades than did the control group, and for the second semester 107 per cent more hours of "A" and "B" grade. Table II, A and B, summarizes these data.

Again some interesting comparisons can be made from decile to decile. For instance, in Section B it may be noted that students in the 3rd decile of the experimental group earned, on an average, as many hours of "A" and "B" grades as did the 8th decile of the control group. It should be noted, too, that the methods used in this project raised

TABLE III

Decile	Number		Total hours non-passing		Average hours non-passing		Difference	%
	X	Y	X	Y	X	Y	Y−X	
Section A								
10th	17	17	0	10	0	.6	.6	
9th	12	12	0	10	0	.6	.6	
8th	16	16	6	20	.4	1.3	.9	
7th	8	8	6	7	.7	.9	.2	
6th	11	11	6	26	.5	2.4	1.9	
5th	9	8	9	11	1.0	1.4	.4	
4th	6	6	11	22	1.8	3.7	1.9	
3rd	8	9	9	16	1.1	1.8	.7	
2nd	10	11	28	38	2.8	3.4	.6	
1st	8	9	8	30	1.0	3.3	2.3	
8–10	45	45	6	40	.1	.9	.8	800
4–7	34	33	32	66	.9	2.0	1.1	122
1–3	26	29	45	84	1.7	2.9	1.2	70
Total and averages	105	107	83	190	.8	1.8	1.0	125
Section B								
10th	16	16	4	8	.25	.50	.25	
9th	12	12	2	7	.16	.58	.42	
8th	15	15	4	34	.27	2.27	2.00	
7th	7	8	5	6	.71	.75	.04	
6th	11	10	8	16	.73	1.60	.87	
5th	8	7	3	0	.38	.0	−.38	
4th	6	6	7	10	1.17	1.67	.50	
3rd	6	7	3	11	.50	1.57	1.07	
2nd	8	8	20	27	2.50	3.38	.88	
1st	8	6	28	6	3.50	1.00	−2.50	
8–10	43	43	10	49	.23	1.14	.91	396
4–7	32	31	23	32	.72	1.03	.31	43
1–3	22	21	51	44	2.32	2.00	.32	−14
Totals and averages	97	95	84	125	.87	1.32	.45	52

the level of first rate achievement—"A" and "B" achievement—at every decile. They did not specialize on any one level of ability and neglect the others. They were adapted to each level of ability in an attempt to encourage each student's achievement at the level of his ability.

3. Semester hours of *non-passing* grades:

Table III, Sections A and B, shows the total and average number of hours of non passing marks by deciles.

Again at every decile level during the first semester and at 8 of the 10 deciles of the second semester the experimental group shows its superiority in having failed fewer hours of work. For the first semester the control group averaged 125 per cent more hours of non-passing work than did the experimental group, and 52 per cent more for the second semester.

4. Percentile rank:

Another criterion of a student's success is the degree to which his achievement conforms to his ability. The decile classification in Tables I to III are based upon the percentile rank of the students in the qualifying examinations given to all freshmen upon admission to the University. This rank is an index of the student's capacity to do college work, and may be termed his expectancy level. The average percentile rank of the students in each decile for both the experimental and the control group is shown in the third column of Table IV. Since each group was paired man for man as closely as possible one would expect the averages to be practically the same, as indeed they are.

The student's achievement as represented in semester grades was also converted into a percentile rank to facilitate comparisons with ability. The average achievement for each decile is shown for the experimental and the control groups under X and Y respectively of column four, of Table IV. These averages were then compared with those of column three and the deviations shown in the fifth column. The last column shows the advantage of the experimental over the control group in centiles. At every decile except the lowest the achievement of the experimental group shows a more favorable conformity to expectancy. Only deciles eight and

ten, of the experimental group, show serious negative deviation.

TABLE IV

Decile	Number		Average expectancy		Average achievement		Average deviation		Difference deviation
	X	Y	X	Y	X	Y	X	Y	Y − X
Section A									
10th	17	17	95.4	95.5	82.3	69.1	−13.1	−26.4	13.3
9th	12	12	85.0	84.4	80.8	58.4	− 4.2	−26.0	21.8
8th	16	16	74.1	74.0	59.1	46.5	−15.0	−27.5	12.5
7th	8	8	64.3	64.3	63.5	50.6	− .8	−13.7	12.9
6th	11	11	55.6	56.1	54.6	32.4	− 1.0	−23.7	22.7
5th	9	8	45.0	44.5	52.2	38.5	7.2	− 6.0	13.2
4th	6	6	32.0	31.8	46.5	24.3	14.5	− 7.5	22.0
3rd	8	9	24.4	24.3	28.8	22.7	4.4	− 1.6	6.0
2nd	10	11	14.3	14.0	31.6	27.5	17.3	13.5	3.8
1st	8	9	5.6	5.8	29.8	20.0	24.2	14.2	10.0
8–10	45	45	85.0	84.9	73.7	58.2	−11.3	−26.7	15.4
4–7	34	33	50.7	50.6	54.6	36.8	3.9	−13.8	17.7
1–3	26	29	14.7	14.7	30.2	23.7	15.5	8.0	7.5
Total and averages	105	107	56.5	55.3	56.7	42.3	.2	−13.0	13.2
Section B									
10th	16	16	95.5	95.7	79.2	66.0	−16.3	−29.7	13.4
9th	12	12	85.0	84.4	77.8	57.1	− 7.2	−27.3	20.1
8th	15	15	73.8	74.0	60.5	37.5	−13.3	−36.5	23.3
7th	7	8	64.3	64.3	65.1	39.2	.8	−25.1	25.9
6th	11	10	55.6	56.1	49.1	32.4	− 6.5	−23.7	17.2
5th	8	7	44.9	44.1	54.4	39.0	9.5	− 5.1	14.6
4th	6	6	32.0	31.8	44.5	17.2	12.5	−14.6	27.1
3rd	6	7	24.5	24.1	35.3	26.3	10.8	2.2	8.6
2nd	8	8	14.3	13.8	34.9	22.9	20.6	9.1	11.5
1st	8	6	5.6	6.0	23.2	27.7	17.6	21.7	− 4.1
8–10	43	43	84.1	84.8	69.7	53.6	−14.4	−31.2	16.8
4–7	32	31	50.4	50.8	53.1	32.7	2.7	−18.1	2 .8
1–3	22	21	13.9	15.0	26.0	18.4	21.1	3.4	8.7
Total and averages	97	95	57.1	55.3	55.4	40.5	− 1.7	−17.8	16.1

For purposes of advising students, achievement within plus or minus 20 centiles of their level of ability was considered satisfactory or within a reasonable degree of expectancy. Negative deviations of 20 or more centiles were considered as representing work inferior to the student's ability and a positive deviation of more than 20 centiles represented unusual success. Table V shows the number of students whose achievement was above, within or below this reasonable level of expectancy. Note particularly the percentages of unsuccessful students at each decile level and the very marked advantage which the experimental group holds over the control group.

TABLE V

		Total No.	10th	9th	8th	7th	6th	5th	4th	3rd	2nd	1st
Unusually successful.....	X	20	0	0	0	3	3	3	3	1	5	2
	Y	9	0	0	0	0	1	1	1	0	4	2
	X−Y	11	0	0	0	3	2	2	2	1	1	0
Satisfactory.....	X	65	13	10	10	4	4	4	2	7	5	6
	Y	58	8	6	6	4	3	5	3	9	7	7
	X−Y	7	5	4	4	0	1	−1	−1	−2	−2	−1
Unsuccessful.....	X	20	4	2	6	1	4	2	1	0	0	0
	Y	40	9	6	10	4	7	2	2	0	0	0
	X−Y	−20	−5	−4	−4	−3	−3	0	−1	0	0	0
Total.....	X	105	17	12	16	8	11	9	6	8	10	8
	Y	107	17	12	16	8	11	8	6	9	11	9
Percentage.....	X	19%	24%	17%	37%	12%	36%	22%	17%	0%	0%	0%
				27%			23%				0%	
Unsatisfactory....	Y	37%	53%	50%	62%	50%	63%	25%	33%	0%	0%	0%
				56%			45%				0%	

		Total No.	10th	9th	8th	7th	6th	5th	4th	3rd	2nd	1st
Unusually successful.....	X	21	0	0	0	3	3	3	3	2	5	2
	Y	7	0	0	0	0	0	1	0	1	2	3
	X−Y	14	0	0	0	3	3	2	3	1	3	−1
Satisfactory	X	57	12	10	10	3	3	3	3	4	3	6
	Y	50	8	7	4	3	5	5	3	6	6	3
	X−Y	7	4	3	6	0	−2	−2	0	−2	−3	3
Unsuccessfu	X	19	4	2	5	1	5	2	0	0	0	0
	Y	38	8	5	11	5	5	1	3	0	0	0
	X−Y	−19	−4	−3	−6	−4	0	1	−3	0	0	0
Total.....	X	97	16	12	15	7	11	3	6	6	8	3
	Y	95	16	12	15	8	10	7	6	7	8	6
Percentage.....	X	19.6%	25%	17%	33%	14%	45%	25%	0%	0%	0%	0%
				26%			25%				0%	
Unsatisfactory....	Y	40%	50%	42%	73%	62%	50%	14%	50%	0%	0%	0%
				56%			45%				0%	

It is apparent from both these groups that the lowest decile students are producing more efficient scholastic results *in terms of ability* than any other decile. The experimental group, however, shows a much smaller percentage of the high decile students doing inferior work than is shown by the

control group, when expectancy level is taken as the criterion by which to measure a student's success.

Fifty-six per cent of the students in the three upper deciles of the control group were unsuccessful for both semesters as contrasted with 27 per cent and 26 per cent of the experimental group. Forty-five per cent of the students in the four middle deciles of the control group were unsuccessful for both semesters as contrasted with twenty-three per cent and twenty-five per cent for the experimental group.

5. Number completing the year in good standing.

The number of students in each group who completed the year's work in good standing was used as a fifth basis of comparison. These data are shown in Table VI. The columns are self-explanatory. Of the three upper deciles the experimental group has 42 or 93 per cent of the original number completing the year in good standing; the control group has 38 or 84.5 per cent. Of the four middle deciles the experimental group has 26 or 74 per cent of the original group completing the year in good standing; the control group 20 or 57 per cent. Of the lowest three deciles both groups have 8 or 25 per cent completing the year in good standing. While it was the purpose of this project to aid students at all levels of ability, it is obvious that in terms of this criterion the

TABLE VI

Decile	Original number		Quit of own accord		Dropped for pr. grades		Prob. for low grades		Good standing		% in good standing	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10th....	17	17	1	1	0	0	0	0	16	16	94	94
9th....	12	12	0	0	0	0	0	1	12	11	100	92
8th....	16	16	1	1	0	2	1	2	14	11	88	69
7th....	8	8	1	0	0	0	0	1	7	7	88	88
6th....	11	11	0	1	0	1	3	3	8	6	73	55
5th....	9	9	1	1	0	1	2	2	6	5	67	56
4th....	7	7	1	1	0	0	1	4	5	2	71	29
3rd....	9	9	3	2	0	0	4	4	2	3	22	33
2nd....	13	13	4	4	1	3	4	3	4	3	31	23
1st....	10	10	2	3	1	1	5	4	2	2	20	20
8–10...	45	45	2	2	0	2	1	3	43	38	93	85
4–7....	35	35	3	3	0	2	6	10	26	20	74	57
1–3....	32	32	9	9	2	4	13	11	8	8	25	25
Total....	112	112	14	14	2	8	20	24	76	66	68	59

least achievement was secured in the lower deciles. The writer wishes to call attention to the descending order of percentages of students successfully completing the year as one goes down the scale from the highest to the lowest third.

Experimental group....	93%	74%	25%
Control group.....	84.5%	57%	25%

SUMMARY AND CONCLUSIONS

By the use of constructive personnel services an attempt was made to improve the quality of scholarship in a group of unselected freshmen men at the State University of Iowa. Pre-registration correspondence; four personal interviews or more with each student; personal letters to parents; comparison of achievement with ability as a basis for judging success or failure; careful diagnosis of conditions contributing to successful or unsuccessful achievement; and discriminating and specific remedial suggestions as to the use of time, study methods, health, rooming quarters, outside employment, constituted the services used. In comparison with the control group, the results show that the experimental group had a grade point average for the year 23 per cent higher; had nearly twice as many semester hours of A and B grades; had only half as many hours of non-passing grades; achieved 13 centiles nearer the level of their ability as measured by the freshman qualifying examination; had 76 who finished the year above probation level as compared with 66 in the control group; and finally had 85 return for the sophomore year as compared with 66.

LONZO JONES,
University of Iowa.

Copyright and the Prohibition of Importation of Books*

ALL modern copyright legislation of all countries prohibits the importation of unauthorized, *piratical* copies. When opposition is urged to the proposals for the prohibition of importation of foreign books which are contained in the copyright bill now before Congress, it is not opposition to the legal exclusion of *piratical copies*. What is proposed and what is opposed are the provisions in that bill to prevent the American book lover from securing for his individual use a copy of an English author's book in the form in which that author has seen fit to have it printed and bound in his own country. Such importation is prohibited because it is contended by the publishers that when made it impinges upon their rights in all cases where they have secured the privilege to reprint an English author's book and to publish it in the United States.

It is, of course, very obvious that when an American publisher has obtained from a British author an assignment of the copyright in his book for the United States and has proceeded to print it from type set in the United States and has bound copies of the work here and placed them on sale, that it is greatly to his interest that such sale should not be exposed to the competition which might ensue if copies of the author's English edition could also be purchased. It is not only that there might be something about the English edition which would appeal to an American purchaser of the book and lead to a choice of the English copy, but it might further be discovered that the English copy was cheaper and that it would cost less than the American copy even when postage and duty paid were added to the English price. It would not be difficult to instance cases where the original English edition was very much cheaper.

The copyright law of the United States grants to the

*Read at the conference of the American Library Institute, Chicago, December, 1930.

American holder of a copyright in a book, even an English book, not only the exclusive right "to print, reprint, publish and copy" such book, but also the exclusive right "to vend the copyrighted work." The publishers, therefore, simply contend that this exclusive right to vend the book within the United States which they have obtained by the English author's assignment to them of the copyright of the book for the United States should—in order to give them what is their just due—permit them to obtain legislation to automatically prevent the importation of such competing copies. This contention started in 1891 and has continued up to the present time, with only some minor modifications in its form of presentation.

The most serious competition sustained by the publishers of an American reprint of an English book has been due to the purchase by American libraries of the English copies of the author's edition, rather than copies of the American reprint. The copyright bill, which was introduced on December 9, 1929, the bill H. R. 6990, sets out in its section 30, the final text of the prohibition of importation clauses which the publishers desired should be enacted. They fill 65 lines of the bill. It is provided that during the existence of the copyright in any work—namely for the life of the author and for fifty years after his death—in all cases where the copyright in such work by a foreign author has been assigned to an American publisher and the work has been manufactured in the United States, then the importation of any copies so manufactured (although authorized by the author or proprietor) is prohibited "*during the period in which any edition of American manufacture is published and copies of such American edition sufficient to supply customers are in the possession of the publisher.*"

Then follows, in a series of subsections, the exceptions to this general prohibition including substantially such as are in our present law with the rather comical interpolation of "motion pictures and motion-picture photoplays," and then in subsection (a) permission to import by individuals, libraries and institutions, as in our present law, of "one copy at a time

for use and not for sale or hire for profit,"—provided the American publisher does not within ten days after written demand agree to supply the desired book.

These were the provisions in the bill at the public hearings before the House Committee on Patents in April, 1930. They are contained in section 30 and received but little attention, only Mr. Cannon, representing the American Library Association, commenting upon them. But the Department of State submitted at that hearing a long, carefully written and very important statement, printed in full in the Report of the hearings, analyzing the provisions of that section. In that document it is recommended that the entire section 30 be stricken from the bill for the reason, among others, that these proposals for the prohibition of importation of authorized copies of foreign books "are designed for the protection of American manufacturing industry, are consequently purely economic provisions, and are without necessary connection with copyright or with a statute governing copyright." It is pointed out that such proposed exclusion of authorized copies of the foreign book must be based upon provisions in the contract for the republication of the book and that "if the American publisher does not obtain an exclusive agency by virtue of his contract there is surely no reason why the Government should try to make one for him." The chief purpose of section 30 is declared to be the protection of "American producers and distributors of books by authors who are nationals of other countries from competition by importations of the same books printed and manufactured in foreign countries." The bill was thereupon amended in the Committee, before being reported, in accordance with the suggestion of the Department of State, and subsection (a) of section 30 was altered to permit the importation without conditions, substantially as now permitted under the law in force, of

"not more than one copy of any such work on any one invoice, for use and not for sale or hire, by and for any free public library or branch thereof, any privately owned or endowed library open to free use by the public or by scholars, or any school, college, society, or institution or-

ganized and conducted in good faith for educational, literary, philosophical, scientific, or religious purposes, or for the encouragement of the fine arts, and not for profit."

Under this provision American librarians would be entitled to continue the importation for their libraries of copies of the authorized edition of works by English authors as they do now. In other words, the librarians have won out in their long struggle against the persistent efforts of the publishers to secure legislation which should automatically cut them off from this reasonable privilege.

But while the alterations made in the text of section 30 in the amended bill reported to the House of Representatives—H. R. 12549—will permit as heretofore importation by libraries, the case of the individual book buyer has been rendered distressingly worse. The sound principles declared by the Department of State have been ignored in his case although it is perfectly obvious they apply with equal force to all individual buyers for use and not for sale—whether librarians or merely booklovers.

The student, the teacher, the university professor, while still ostensibly permitted to import as they may now under the law in force "not more than one copy of any such work on any one invoice, for individual use and not for sale or hire," can only do so subject to the following restrictions, *quoted verbatim* from section 30 (b) of the bill H. R. 12549.

"provided that within ten days prior to the date of the ordering of such copy for importation, the proprietor of the United States copyright or rights to such work, within ten days after written demand for a copy of such work specifying that such copy is desired for use and not for sale or hire, shall have declined or neglected to agree to supply the copy demanded at a price equivalent to the foreign price thereof and transportation charges, plus customs duties when subject thereto; or provided that at the date of the order of such copy for importation no such registration and deposit of such copies of the American edition shall have been made as aforesaid."

This is confused language but it indicates clearly enough that the American student or professor, who sees the announcement of an English book which he desires to buy, cannot at once order it directly from London. He must first

try to ascertain whether the book has been reprinted in the United States and whether it has been duly deposited and registered for copyright and by whom. He can only obtain this information authoritatively upon inquiry in the Copyright Office. But such deposit and registration are often delayed for weeks and months. If, however, the would-be purchaser has ascertained the fact, he may then send his order for the book to the American publisher of it; but he must then wait ten days to further ascertain whether the latter will decline to supply the book or simple neglect his order. In either case—whether his order is refused or merely ignored, he may then order the copy of the book from abroad. But American publishers are permitted, and it is their practice when proposing to publish an American edition of an English author's book, to send notice to the customs authorities of that fact and to request the prohibition of importation of any copies of the original edition. There seems no reasonable likelihood that the postmaster or custom house inspector would know or could ascertain that the particular book in such case was an exception and should be permitted importation. What is here proposed is neither equitable nor practicable. There are no prohibitive provisions which parallel these now proposed in the copyright legislation of any country, and, as the Department of State has declared, they are "altogether inappropriate in legislation relating to copyright." When proposed years ago the head of one old and important publishing house pointed out that the laws of the United States theretofore prohibited the importation of but three things: Chinese, counterfeit money and lottery tickets, and that the proposal to add, as a fourth article forbidden, a *good book* was sure to arouse criticism. When this was first proposed in 1891, Senator John Sherman made a strong speech against it. He said:

"I put it upon broader grounds. . . . In no case would I levy such a prohibition upon such an article of necessity as a book. Books are just as much articles of necessity to an intelligent man as the food he eats and the coffee he drinks; he must have them. Most of us, when we want a book, send and get it. If we can get it in our own country we may be easily satisfied; but suppose the American publisher who has

this monopoly should refuse to issue a book of sufficient taste and of a character that suits our taste? Ought not taste to be indulged in—ought not fancy to be indulged in? Are we mere plodding clodhoppers, satisfied with what only American publishers will publish, without any respect to our taste as to the character of type and the illustrations and all that?"

The publishers' proposals were defeated then, and these provisions for the prohibition of importation of authorized copies have been refused by Congress ever since. They should not be proposed or urged now, and they should not be enacted into law.

The individual book buyer was not represented either at the conferences on the copyright bill, or at the public hearings on that measure. His present privilege of importation is sufficiently restricted. He should, at least, be allowed to continue such limited privileges as he has had under law since 1891, and not be further restricted and hampered.

Under existing law a person or a family arriving in the United States from a foreign country is allowed to bring into our country such books as he or they may possess which form part of their personal baggage and are not intended for sale. To this provision of present law in section 31 (d) there has been added in the bill:

"*Provided, however,* That no one person shall so import more than *five* such works at one time."

No statement was made at the hearings in explanation of this extraordinary proposal. It certainly should be stricken from the bill before enactment.

It is sometimes contended that the provisions of the British copyright law correspond to the proposals contained in section 30 (b) of the copyright bill. But upon careful examination they will be found to be entirely different. Section 14 of the British Copyright Act in force provides that "copies made out of the United Kingdom of any work in which copyright subsists which if made in the United Kingdom would infringe copyright" are prohibited importation. But this refers to *piratical* copies. It is obviously absurd to suppose that copies of the author's own edition of his book could infringe his copyright in it.

The British Act also provides for the enforcement of a contract between author and publisher when it contains an agreement that the authorized reprint shall not be sold in competition with copies of the original edition, and when the copyright owner has given notice in writing to the proper customs official that he is desirous that copies of such reprint should not be imported. But the language is very guarded. It reads:

"Before detaining any such copies or taking any further proceedings with a view to the forfeiture thereof . . . the Commissioners of Customs and Excise may require the regulations under this section to be complied with, and may satisfy themselves in accordance with those regulations that the copies are such as are prohibited by this section to be imported."

There is here no brash proposal for the automatic prohibition of the purchase of a copy of the author's own edition of his book, such as is proposed in the copyright bill H. R. 12549.

The Tauchnitz series of reprints of the works of English authors is frequently cited as an example of what is now proposed; it being well known that copies of the Tauchnitz books may not be imported into England, nor even carried there by travellers. But to be a parallel case it would need to be shown that the English originals of the Tauchnitz reprints are excluded from Germany. That is, however, not the case, nor is there any proposal to that end. The Tauchnitz books are cheap and handy reprints made for the convenience of English reading travellers on the Continent, and their publication in no way interferes with obtaining from England at any time and without formalities of any kind copies of the original British edition for use or sale either in Germany or in any other Continental country.

THORVALD SOLBERG,
U. S. Register of Copyrights, 1879–1930.